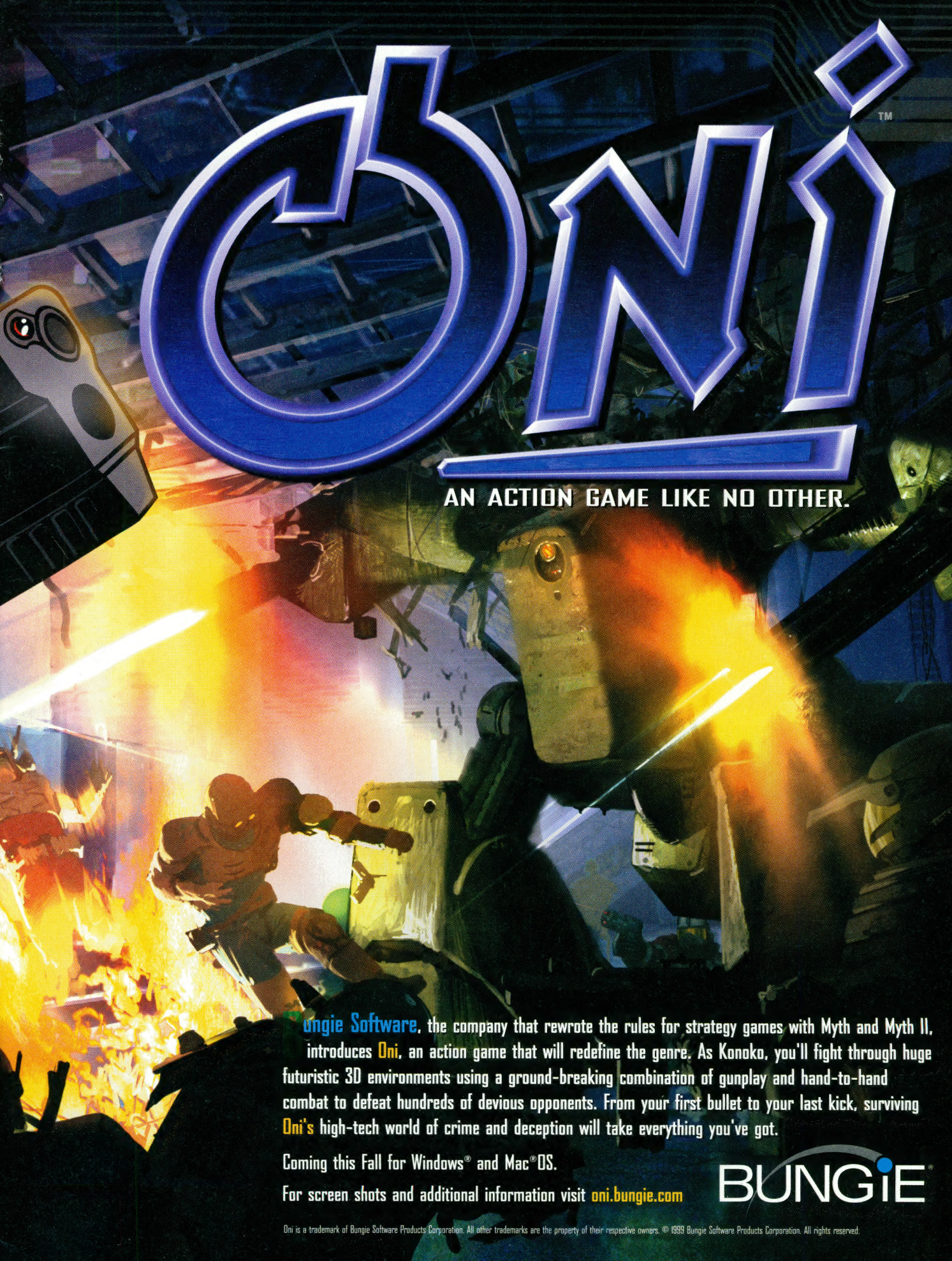
Win the iBook!
MacHome™
Apple
Enter the contest! See details on pg. 30
Freeze! See pg. 18 for 23 game previews.
MacHome Journal Office
Avast! Check out the 11 large monitors reviewed on pg. 32.
Hey! What's this about winning an iBook?
Behold! 'Tis MacHome's biggest entertainment issue ever!
PEAK
AXIS
TCT
november 1999 • www.machome.com

KONOKO'S ONLY FUTURE
IS TO AVENGE HER PAST.


Oni™
AN ACTION GAME LIKE NO OTHER.
Bungie Software, the company that rewrote the rules for strategy games with Myth and Myth II, introduces Oni, an action game that will redefine the genre. As Konoko, you'll fight through huge futuristic 3D environments using a ground-breaking combination of gunplay and hand-to-hand combat to defeat hundreds of devious opponents. From your first bullet to your last kick, surviving Oni's high-tech world of crime and deception will take everything you've got.
Coming this Fall for Windows® and Mac® OS.
For screen shots and additional information visit oni.bungie.com
BUNGIE®
Oni is a trademark of Bungie Software Products Corporation. All other trademarks are the property of their respective owners. © 1999 Bungie Software Products Corporation. All rights reserved.

Forget megahertz.
We're talking gigaflops.

Presenting the Power Mac G4. The world's first desktop supercomputer.

What makes a supercomputer "super" is its ability to execute at least one billion floating-point operations per second. It is a staggering measure of speed known as a "gigaflop." The new Power Mac™ G4 is the first personal computer in the world to achieve this level of performance. The secret of this stunning speed is the new G4 processor with its Velocity Engine™—the heart of a supercomputer miniaturized onto a sliver of silicon. Applications that tap the Velocity Engine's power typically run twice as fast as they do on the fastest Pentium III-based PCs.* Common Photoshop tasks, for example, run twice as fast. And using a set of Intel's own tests, the 500MHz G4 chip was 2.94 times as fast as the 600MHz Pentium III processor. Chances are, you've never even heard of a gigaflop before. But very soon you won't be able to live without at least one on your desk. For more information and complete specifications, visit us at www.apple.com. Think different.™

What makes a supercomputer "super" is its ability to execute at least one billion floating-point operations per second. Like the new Power Mac G4.

The G4 chip incorporates the Velocity Engine—the heart of a supercomputer miniaturized onto a sliver of silicon.

* In CPU and Photoshop tests. © 1999 Apple Computer, Inc. All rights reserved. The Apple logo is a registered trademark and Power Mac, Think different and Velocity Engine are trademarks of Apple Computer, Inc.

november 1999

contents

[www.machome.com]

volume 7, number 11

The Gaming Issue

Big Game Hunting ____ 18

By Alex Handy

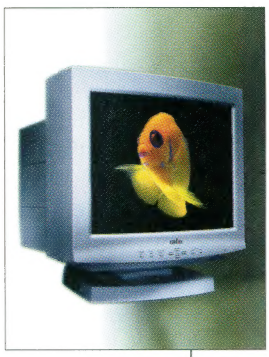
Some say the Mac lacks when it comes to gaming. Well, to quote Stanley Kowalski's defining moment in *Streetcar Named Desire*, we say "*ha!*" That's because we have recently spoken with the top names in game development and have prepared this report on what's coming up in the entertainment world in the next few months. You're sure to be pleasantly surprised.

Livin' Large: MacHome's 21-inch Monitor Showdown ____ 32

By John Poultney and Jackie Dove

You've seen those big monitors on the desks of the NASA scientists, in front of the air traffic controllers, and next to the seismograph on the evening news. Now you're thinking about getting one of your very own. And why not? They're not as expensive as you might think, but they sure are heavy. Making sure to lift with our legs, not our backs, we rounded up 11 of these *muy giganté* monoliths, stacked 'em on tables, lifted one eyebrow quizzically and scrutinized heavily. Can your heart stand the *terrifying, pulse-pounding conclusion* of the 21-inch monitor showdown?

18



32

newsWire

Read all about it: news, products, rumors, gossip, quotes, and innuendo

Apple's stunning G4s : The Lowdown
Apple 22-inch Cinema Display
OS 9 Coming at You
G4 Upgrade Cards
A Flurry of Digital Cameras
Visor Sits in Your Palm
PhotoGenetics Improves the Picture
Epson's Mighty Scanners

10

Departments

38 Your Office

38 **Home Office**
Setting up a virtual storefront

42 **Reviews**
Face-Off: Yee-haw! It's a speaker jamboree!
CloseUp: QuickTime 4 Pro

58 Connections

58 **Feature**
Feature Workshop: Creating JavaScript Rollovers

61 **Bookmarks**
Shopping to Save the Earth

62 Your Family

62 **Feature**
The Top 10 Children's Software Packages!

65 **News & Reviews**
More reviews than at which you can shake a stick. And news, did we mention news?

70 Entertainment

70 ***Feature***
Huzzah! The Top 10 Mac Games of All Time!

76 **Reviews**
Halo, Halo, Halo!

81 Back to Basics

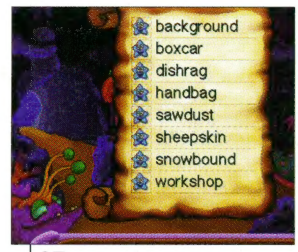
81 **New Owners**
Make Yourself at Home!

82 **Tips & Tricks**
Word Feature, Faster Connection Times for Net Users

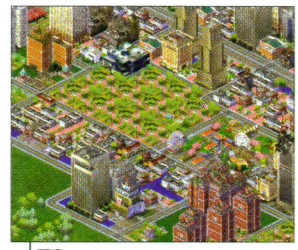
84 **You Ask, We Answer**
Attachments for PC folks, Using the Launcher, Further Ridding Oneself of Annoyances

86 **The Way It Works**
Understanding the Internet

42 Your Office Reviews



65 Your Family Reviews



76 Entertainment Reviews

Columns

6 **From the Chief**
I feel much better now. No, really.

8 **Write On**
Hear You Been to College

89 **Ad Index**

79 **November CD Content**

90 **Smart Shopper**
Your Source for Best Mac Buys!

104 **Ihnatko's Commentary**
The G4: Supercomputer without Drama

Reviewed This Issue

Your Office: Software

3 apples	e-Picture
4 apples	Fermata
3½ apples	PhotoFrame 2.0
3 apples	QuickTime 4 Pro
4½ apples	Snapz Pro 2
4 apples	SoundJam MP
4½ apples	TypeStyler 3.0

Your Office: Hardware

4 apples	Apolla speakers
4 apples	ACS65i speakers
4 apples	FireWire 2 Go
4 apples	Orb SCSI drive
4½ apples	Mac Audio CA-2000 speakers
3½ apples	SoundMan X2 speakers
4½ apples	Stealth Serial Port
4½ apples	SnapScan Touch

Entertainment

4½ apples	Simcity 3000
4½ apples	Total Annihilation
3 apples	Harpoon 3
4 apples	Cythera

Your Family

4½ apples	Grolier Multimedia Encyclopedia Deluxe
3 apples	Spelling Underwater
3½ apples	Alfred's Essentials of Music Theory
4 apples	Play Along with Wimsy

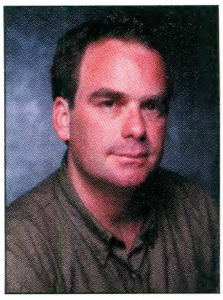
Our Rating System

5 apples	**Mac-nificent.** You gotta get it. No flaws.
4 apples	**Excellent.** Recommended even if it has a minor flaw or two.
3 apples	**Average.** Despite problems, still a worthwhile product.
2 apples	**Below Average.** Has serious flaws that limit its usefulness or fun.
1 apple	**Poor.** Avoid this product at all costs.

iMac/G3 Compatible USB

Indicates iMac/G3 compatibility

from the chief [Editorial]



A Time of Quiet Reflection

I think everyone will always remember where they were on the day that Apple introduced the G4. After all, this is the machine that changes *everything*.

But enough of that! No more superlatives! Today is a time of quiet reflection. In the last few editorials, I have lauded Apple with copious praise, universally bestowing its latest offerings with *les mots suprême ad infinitum*. But we journalists aren't supposed to be cheerleaders. We're meant to lean back thoughtfully in our high-backed leather chairs, raise one eyebrow purposefully, and cast a skeptical eye on various companies' claims of superiority. "Pish-posh," we're meant to say. "KrillCo says its latest model is twice as fast as the last. Harumph! Old Man Krill has yet to make good on his last grand claim. Wake me when it's over."

I'd love to take such a cantankerous stance, were it truly warranted. And a few years back it would have been. Apple announced a bewildering phalanx of products every three hours or so, each portending to be the answer to our every need. Then later, after all the hullaballoo had died down, the products quietly petered out without making much impact, the victims of too many cooks, not enough ingredients.

But that was then, and thankfully, I wasn't writing any editorials then. Thank goodness I am writing this one at a time when Apple really doesn't seem to be doing much wrong. Oh, I can *try* to find something to complain about. Let's see ... Apple's stock is no longer a bargain, having hit an eight-year high. The G4's supercomputing performance so concerns the U.S. Government, it can't be exported to some countries. Isn't Apple concerned about cutting out potential markets? No, said hardware VP Jon Rubenstein, those countries can just buy iMacs.

Très pathetique, non? Try as I might, I just can't be a critic.

Here's something. I found another area where there's not as much software for Mac as there is on Windows: Viruses! 'Most every week there's a dastardly new virus that threatens to wipe out the hard drives of thousands of computers ... but the reports don't always say what kind of computers, and it almost always turns out that these viruses don't affect Macs. Sometimes the sources clarify themselves, as *The New York Times* did a few months back. But oftentimes, the public is led to believe that no computer is safe from viruses, when Macs are in fact much safer than PCs will ever be.

So here we head into the big Year 2000 imbroglio that's supposed to disable our precious computers and turn us all into cheese-hoarding, rifle-totin' survivalists. As Mac users, we've got a lot to celebrate right now. So Windows still has most of the market. We've got supercomputing power with the G4, have never had to worry about Y2K compatibility, and we have hardly any viruses compared to Windows.

People, this is getting just plain ridiculous. Spread the word, won't you? Windows gave it a good shot, but it's time to face the truth. We've been saying all along that Macs are better; now we've got proof. Bring on the superlatives!

John Poultney
Editor

MacHome JOURNAL
www.machome.com

President
James Capparell, jcap@machome.com

Publisher
Susan Ford, susan@machome.com

Editor
John Poultney, john@machome.com

Art Director
Joy Jacob Sheldon, joy@machome.com

Editorial

Reviews Editor David Weiss, dw@machome.com
News Editor Jackie Dove, jackie@machome.com
Associate Editor, Gaming & Education
Alex Handy, alex@machome.com
Copy Editor Roberta McNair, roberta@machome.com
Editor at Large Chris McVeigh, chris@machome.com
CD-ROM Editor Chris McVeigh, chris@machome.com
Contributing Writers Andy Ihnatko, Jeff Battersby, Paul Boone, Art Jones, John Lee, Cathy Lu, Amy Shafron, Carrie Shepherd, Gene Steinberg

Circulation

Director of Circulation
Ira Epstein, ira@machome.com
Newsstand Consultant Angelo Gandino

Advertising

Regional Manager
Steve McMahan, steve@machome.com
415-957-1911, ext. 18

Account Executive, West Coast
Tania Perez, tania@machome.com
415-957-1911, ext. 16

Smart Shopper

National Sales Manager
David Hughes, david@machome.com
415-957-1911, ext. 38

Operations

Business Manager
Lorene Kaatz, lkaatz@iname.com
Network Administrator
Ashley Jones, ashley@machome.com
Office Administrator
Joey French, joey@machome.com

MacHome Interactive
www.machome.com

Hot Tips Editor
Pat St.-Arnaud, pat@machome.com
Sales & Marketing
Susan Ford, susan@machome.com
MacHome Tech Support
(www.machome.com/techsupport.html)
Scott William and No Wonder
MacHome Software Center
Joel Mueller

Reprints

For 100 or more high-quality article reprints, please contact Reprint Management Services at 717-560-2001

Customer Service

For change of address, subscription inquiries, back issues, and service problems, call **800-800-6542** Monday to Friday, 7:30 A.M. to 10:30 P.M. central time; or write to **MacHome Journal Subscriptions, P.O. Box 469, Mt. Morris, IL 61054**; or e-mail us at **mhjr@mf.kable.com.** Basic subscription rates: One year (12 issues plus 6 CD-ROMs) U.S., $34.95; Canada, $44.95; foreign, $54.95 (U.S. funds only). MacHome Journal may rent its mailing list.

General Offices

703 Market Street, Suite 535, San Francisco, CA 94103
Telephone: 415-957-1911; Internet: www.machome.com

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. MacHome Journal is not responsible for unsolicited manuscripts. Submissions must be sent electronically for consideration. MacHome Journal is an independent periodical not affiliated with Apple Computer, Inc. "MacHome Journal" and "Solutions for Work, Play & Education" are trademarks of MacHome Journal. Copyright © 1999 by MacHome Journal. All rights reserved.

One touch scanning to e-mail, printer, file or fax

Great scans every time with Agfa ScanWise™ software

36-bit, 600x1200 dpi

USB interface

Only $129*

Comes with seven colored handles

The new SnapScan Touch™ scanner

www.agfahome.com

AGFA

*Agfa MSRP 6/99. ©1999 Agfa Corporation. AGFA and the Agfa rhombus are registered trademarks of Agfa-Gevaert AG.

Write On [Your Letters]

Mac with a View

In your column describing the benefits of the PC MagnaViewer, a $295 contraption that sits a foot in front of your monitor and magnifies the screen (September 1999, page 29) you forgot to remind Mac users about a free and easy-to-use control panel that comes with the Mac OS: CloseView.

The little Apple-native add-on utility included in every Macintosh OS since System 7 enables users to magnify screen contents up to 16 times. This utility allows for easier viewing by users who are visually impaired, or who may have a smaller monitor. It can also be downloaded from Apple at *www.apple.com/education/k12/disability/universal.html.*

Sometimes the easiest and cheapest solutions are still the best!

Sean J. O'Briant

Tips about Tips

Regarding "Tips of the Titans" in your September issue: Tip #74, ripping out the cathode-ray tube of an old non-working Mac to create a fish tank, is at best pretty stupid, and it could be life-threatening. I'll remind you that the tube acts as a bloody-great capacitor, and it can hold a stored charge of extremely high voltage for an extremely long time. Why do you think they put those "high-voltage" warning labels in there — just to keep the label-printing industy in business?

Dave Vick

For your information, "Tips of the Titans" contained an incorrect Key combination in Tip #25, which instructs you on switching between open applications. Don't use Option-Tab; use Command-Tab. And in Tip #22 you say to use Apple-P to paste data; that's the print command. To paste, as I'm sure you know, use Apple-V.

Gary DeConsuelas

September's "Tips of the Titans" article gives Character Chooser as an alternative to KeyCaps in Tip #9. Tsk tsk! Not only was the URL wrong (the actual Website is *www.esselte.com/letraset/catch/characterchooser.html*, not "*charactechooser*"), but the software's not compatible with OS 8.5. However, fear not. Instead of using this circa-1994, pre-PowerPC artifact, try Font Explorer, made in 1998. It has a beautiful interface and works flawlessly. Get it at *http://pages.infinit.net/trottier/products.html*

Rick Hill

✍ *Criminy. Well, 100 out of 103 ain't bad. And that reminds me of another tip. When confronted with incorrect URLs, we suggest taking the following approach, should you ever come across one again. Say the URL in question, for an online story about zombies attacking the city, is* www.cnn.com/news/zombies, *but some Einstein mistakenly writes down* www.cnn.com/news/zombie, *leaving off the critical last letter. A good approach is to work backwards through the URL, so that you get to the page before the one listed. Usually directories on a Web page are separated by a slash (/) in the URL. So in this example, take off the last word before the slash, so you just have* www.cnn.com/news. *Then, the good Lord willing and the creek don't rise, you should be able to scroll through that page to find the item you're looking for.*

Switchcraft

In the September issue, Keith Garling wrote in his letter (Once You GoMac, You Never Go Back) that the Application Switcher took extra steps to use and that it was always in the way. If you open your Mac's Help Viewer and search on "Switcher," you'll get a link "Switching between open programs." Near the bottom of this page is a link, "Open the Application Switcher in icon view in the lower-right corner and list programs in the order they were opened." Click this link and that's exactly what will happen every time you start up.

John Sawyer

I Know I Can I Know I Can I Know I Can

Like Ivan Velez (Letters, October 1999) I am also at a loss as to where I can learn to program for the Mac. Apple has student programs as you noted, but I'm 46 — just a student of life. I tried to teach myself the guitar but that didn't work, until I found a teacher. I know I can be a Mac programmer and make a difference, but I need a tutor to guide me. Where can I find one? Help!

Kim M. Rowe

✍ *Ah, so very poignant. It can be hard to find someone with specific expertise in Mac programming, let alone someone to tutor you. But here's an idea: Look at the About boxes in programs you like. Some contain credits of people that worked on the software. Get the names, e-mail them, and ask them for advice or other resources they know of. It might just work.*

What Is Hip?

I hope that Andre Jackson, whose letter appeared on page 8 of the September issue, doesn't cancel his subscription before he can read this letter.

It might interest him to know that my wife and I have been *MacHome* subscribers ever since we got a free copy of the first issue several years ago at an AMUG (Arizona Mac Users Group)

meeting. At that time I had an old original Mac 512k, and my wife had a Mac llsi. Today (like Andre), I use a Performa (637CD) for most of our word processing and financial work, while my wife has a PowerMac 6500 for her newsletter and digital camera work. For our Internet/e-mail we use our laptop, an "old" Powerbook 5300cs. The Performa and laptop both run OS 7.5.5, basically because I'm too lazy to upgrade even though I have the CD. And everything is running fine, so why mess with it?

These systems might be considered "old and outdated" by some, and they wouldn't be worth much to sell, but they're doing the job. Like Andre, we aren't into games and don't do much 'Net surfing either. But even with our "old" clunkers, we still read, like, and enjoy *MacHome*, and always get something out of every issue. The monthly tips alone are worth the price, and the #9 tip about Character Chooser was priceless, and something we really found useful, not just "cool" or "hip."

One last thing: we know what Andre does to get "cool"; dare we ask about "hip"?

Jerry and Eva Hutchison

✍ *Thanks Jerry and Eva! The check's under the left rear quarter panel of the '65 Chevelle parked at the corner. Oh, and regarding Character Chooser — good thing you weren't using OS 8.5! Now who says* MacHome *doesn't look out for users of older systems?*

I Hear You Been to College

Regarding the "Erudition" response in Letters, September 1999, unless some Great Power intervenes, your "ongoing quest to disseminate illustrative sapience" lacks the sentience required to be full of hope ("is embodied ... hopefully elsewhere in the periodical ...").

Neil Koshr

I am less than impressed by *MacHome*'s display of "erudition" in the reply to Agnes E. Cloninger's letter in September's "Write On" column. "Epistolary" is misspelled; "hopefully" is a less-than-literate substitute for "it is to be hoped" (adjectival phrase, not an adverb); "epistolary missive" is inanely redundant; "ruminances" is a quaint and off-putting alternative (which may or may not be in the Oxford English Dictionary but is not to be found in the college dictionary at hand) for "ruminations"; and "perambulations" (strolls, wanderings) seems somewhat inappropriate, as walking about doesn't necessarily have an intellectual component at all.

Sandy McCroskey

✍ *NO KILL I*

Write us!

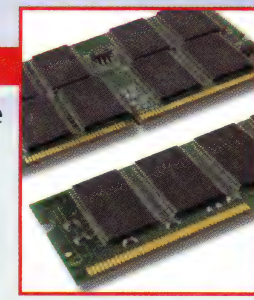
Please write us with your comments! All letters are assumed intended for publication and may be edited. You can reach us by snail mail at:
703 Market Street, Suite 535
San Francisco, CA 94103 or by e-mail:

letters @ machome.com

iMAC FREE PowerUSB Hub With a RAM Purchase

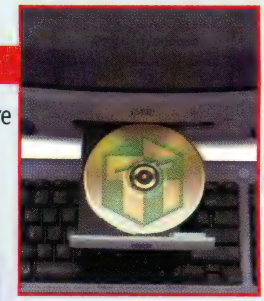
RAGEOUS

Buy 128 megs of TechWorks supercharged memory and get a FREE USB hub in your favorite color. Or, purchase 64 megs of RAM and get $20 off the purchase price of a PowerUSB hub. Why Wait? Just plug and play today!



PowerRAM
- Boost System Performance
- Run Applications Faster
- Increase Productivity
- Easy Installation
- Toll-Free Technical Support
- Lifetime Limited Warranty

PowerUSB Hub
- Works w/iMac or G3 Systems
- Plug & Play Auto Detection
- 4-Port Hub Expansion
- 12Mb/s & 1.5Mb/s Speeds
- 1-Year Limited Warranty



NEW PowerCDR Drive
- Internal CDR Drive & Software
- 4x Write, 20x Read
- Free, 1 CD Recordable Disk
- 6 Flavors of CD Buttons
- 1-Year Limited Warranty

Special Offer:
Buy 128 Megs & get a FREE USB Hub
Buy 64 Megs & get $20 off a USB Hub

Online Ordering:
www.techworks.com
CALL 1.800.704.0189

TECHWORKS
Power To Perform™

© TechWorks is a registered trademark of TechWorks (Delaware) Inc. Offer valid (10/5-12/31/99)for web pricing only, while supplies last, excludes bulk orders.

newsWire [News & Products]

By Jackie Dove

Apple G4s Set the World on Fire

Billing it as a "supercomputer in a chip," Apple iCEO Steve Jobs announced the creation and immediate availability of the **Power Mac G4** at Seybold San Francisco, the ultimate trade show of the graphic arts community. Apple's upgrade of its professional desktop models, which stunned the overflow audience of more than 1,000 at Jobs' keynote address, was nothing short of revolutionary.

Jobs, dressed nattily as is his wont, sprinted through the corporate details about inventories, profits, QuickTime 4 downloads, hot new deals with Warner Bros. Records and Rhino Records, and several promotions of the new movie Toy Story 2 from Disney and Pixar (where Jobs is the real CEO), which will be out by Thanksgiving. All that was impressive enough for the suits in the audience.

But the real jolt of the morning was the new Power Mac G4s. The G4s, Apple said, will do for scientists, engineers, artists, and musicians what the iMac has done for consumers and businesses, and what the iBook (which has logged some 140,000 orders as of press time) promises to do for teachers and students.

Weapon Specs

Apple announced three standard G4 models, all of which will be available through Apple's online store (http://store.apple.com), where you can cook up your own configuration of features, or you can buy it through an authorized Apple reseller. The 400-MHz model comes with 64MB of RAM (expandable to 1GB), a 10GB hard drive, a CD-ROM drive, two FireWire ports, and sells for $1,599 without the monitor. That model was available as of August 31.

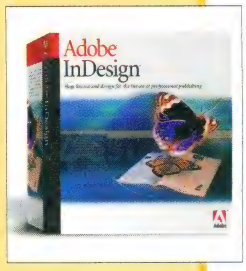
Two higher-level G4 models are also in the works. A 450-MHz will pack 128MB of RAM, a 20GB hard drive, and a DVD-ROM, and will sell for $2,499. That model is also available now. The top-of-the-line model flies at 500 MHz, comes with 256MB of RAM and 27GB of storage space, and contains a DVD-RAM. That model will sell for $3,499 when it becomes available sometime this month. Both higher-end models are expandable to 1.5GB of RAM. The new G4 computer is so powerful that the U.S. government has applied export restrictions on it to countries such as China, Iraq, and North Korea.

Brave New Chip

The force behind the Power Mac G4s is the new **G4 chip**, which delivers a supercomputer level of performance. Okay, so what does that mean? It means, simply, that

The In Crowd

Relegating its venerable PageMaker software to the business market, Adobe is now shipping **InDesign**, its new page-layout and design program for professional publishers. The program retails for $699, but owners of Photoshop, Illustrator, PageMaker, and QuarkXPress can upgrade to InDesign for $299 until December 31, 1999.



Using a familiar interface derived from other Adobe products, InDesign has been written from scratch as an expandable, object-oriented program consisting of a small-core application built with plug-ins. A number of those plug-ins were demonstrated at Seybold.

InDesign has 1,300 features that concentrate on text, typography, and multi-lingual publishing, including a multi-line text composer, optical kerning, multiple undo and redo, high-resolution EPS and PDF display, and zooming features from 5% to 4,000%.

Adobe, 800-833-6687, www.adobe.com

DeBab for Home

Equilibrium has announced DeBabelizer LE, a low-cost, home-office version of its image-editing, conversion, and optimization software. It will be available on our favorite platform sometime this quarter for $50.

This software is compatible with most digital cameras and scanners, enabling you to acquire your images for immediate processing. DeBab also lets you organize and manage image, animation, and digital video files.

Equilibrium, 800-555-1212, www.equilibrium.com

Apple continued

the G4 processor can perform over one billion floating-point operations per second (or gigaflops — giga, meaning billion; flop, meaning floating-point operation). The G4's theoretical performance tops four gigaflops. The chip, engineered by Apple, Motorola, and IBM, incorporates a new processing unit called the Velocity Engine, formerly referred to as AltiVec.

The G4 can process data in 128-bit chunks, as opposed to 32-bit or 64-bit chunks in earlier processors. In addition, Apple added 162 new instructions to boost the chip's performance. The chip can perform four (and sometimes eight) 32-bit floating-point calculations per cycle, which translates into two to four times faster than earlier processors. That will prove especially helpful if your work (or play) includes graphics, animation, 3D games or 3D rendering, and video. While the low-level version at 400 MHz is based on the G3 motherboard, the higher-end versions sport a motherboard redesign.

To take advantage of the velocity engine, hardware and software developers must rewrite their programs. As of this writing, more than 60 developers are optimizing products for the G4 chip. These include: 3dfx Interactive, ATTO Technology, Adobe, Avid Technology, Bungie Software, Casady & Greene, Linker Systems, Macromedia, Maxon Computer, Media 100, Research Systems, Sonic Solutions, Synthetik Software, Terran Interactive, and TeraGlobal.

The AirPort Wireless network device is an option for the 450-MHz and 500-MHz models. Those models have AirPort antennas and accept the same 11-Mbps card as the iBook. All models feature 1MB Level 2 backside cache, dual Universal Serial Bus (USB), and 400-Mbps FireWire ports.

Silver Skin

The Power Mac G4s, sporting an elegant silver, gray, and graphite color scheme, were touted as the "ultimate Photoshop machine."

The new G4s run professional applications such as Adobe Photoshop twice as fast as a 600-MHz Pentium III PC, Apple says. Some Photoshop filters run up to four times as fast. The 500-MHz G4s literally smoked the 600-MHz Pentiums in comparison tests at the keynote.

Indeed, John Warnock, Chairman and CEO of Adobe, billed the G4 as the fastest machine to run Adobe applications. "You have to love these machines," he said.

The Big Screen

A Steve Jobs keynote wouldn't be, well, a Steve Jobs keynote, without saving some of the flash for last. So, almost as an aside, Jobs also introduced a "companion" to the G4: Apple's new **Cinema Display**, a remarkable 22-inch flat LCD monitor. It features a "letterbox" format with 1,600 x 1,024 pixels and millions of colors, giving you the same viewing area as a 24-inch flat CRT display. Unlike most monitors, it receives data digitally — directly from the computer.

The new monitor is twice as bright, twice as sharp, and has three times the contrast of CRT displays, and no flicker. It comes bundled with the 450-MHz and the 500-MHz models. At that size, you can display an entire 11" x 17" image with room to spare.

Not only that, the Cinema Display is aptly named, as it comes close to the pixel ratio used in DVD movies, which means you can watch your favorite movie right on a large screen. And (natch!) it comes in a clear casing that perfectly complements the new Power Mac G4s.

The display costs $3,999 and is sold exclusively on Apple's Website store, bundled with the higher-end G4s. Orders will be accepted starting in October 1999. The cost for the 450-MHz bundle is $6,500.

Apple, 800-665-2775, www.apple.com

OS 9 Leads the Way

Steve Jobs' announcements about hardware notwithstanding, the demo of **OS 9**, the operating system to follow OS 8.6, was not trivial. OS 9 (which does not immediately ship with the new G4s — you'll have to upgrade) is designed for multiple users and with the Internet in mind. That means everyone in your house can have their own desktop and preferences and can access them through voice-recognition technology. OS 9, slated for an October 1999 release, is $99. If you already bought OS 8.5 and 8.6, you've got a $20 rebate coming your way with OS 9.

In OS 9, a "keychain" keeps track of those pesky IDs and passwords to your e-mail accounts and registered newspaper subscriptions. The new OS also comes with encryption, and get this: direct support for the Palm OS! Hence, users can sync up their Palms (or Visors, see next page) directly, no muss, no fuss.

Sherlock 2, the super-charged search utility we told you about last month, lets you share files over the Internet just the way you would over a local network. The OS handles its own updates over the Internet, as well, automatically downloading new drivers and patches. It also can run AppleScript scripts that launch commands on remote Macs through a standard Internet connection. Mmmm ... now *that's* a thick and zesty combo.

The Upgrade Path

Now that the new G4s have hit the scene, third-party processor upgrade companies have been working to get your older Macs up to speed. Newer Technology (www.newertech.com) has released the **MAXpowr line** of G4 upgrades for the following Mac Models: 7300, 7500, 7600, 8500, 8600, 9500, and 9600. The upgrade cards also work with the following clones: Power Computing PowerTower Pro and PowerWave, the Umax S900 and J700 series, and the beige Power Mac G3s. The Apple ROM (Read Only Memory) update for the blue-and-white G3s, however, makes it impossible to upgrade these models to the G4 at the moment, but Newer points out that since Apple changes ROM updates frequently, that picture could also change. The upgrade cards can use up to 2MB of backside cache.
Newer Technology, 316-943-0222, www.newertech.com

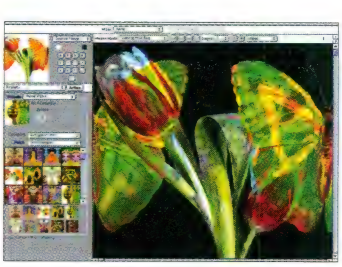
Sonnet Technologies has announced a series of G4 upgrade cards in 400-, 450-, and 500-MHz speeds. The new line of cards, which ship this quarter, are compatible with most PCI Power Macs from the 7300 series up to the G3s, including the early editions of the blue and whites.
Sonnet Technologies, 800-786-6260, www.sonnettech.com

PowerLogix has weighed in with the PowerForce G4 upgrade cards for Power Macs and clones, which will be available in 350-, 400-, 450-, and 500-MHz speeds with 1MB or 2MB of backside cache. The cards are compatible with standard Apple Power Macs from the 7300 to the 9600, Power Computing PowerWave and PowerTower Pro, Umax S900 and J700, and also beige and some blue-and-white G3s. The cards will be available this quarter, but the price has yet to be set as of press time.
PowerLogix, 888-769-9020, www.powerlogix.com

XLR8 has announced that its new MACh Carrier G4 upgrade is now available. It works with all beige Power Macs from the 7300 to the G3 and clones. The company has enhanced the package with custom G4 and AltiVec utilities and additional AltiVec (Velocity Engine) performance enhancements for Photoshop. The 400-MHz version costs $999; the 450-MHz version costs $1,299; but no pricing is yet available for the 500-MHz MACh Carrier G4.
XLR8, 316-636-5544, www.xlr8.com

When in Doubt, Synthesize

As technology advances, more and more programs will make digital art more fun and productive. Synthetik has introduced **Studio Artist**, a $295 painting, drawing, image, and video-processing program — what it calls a "graphics synthesizer" — that gives you extensive control over 600 built-in paint and graphic presets. Each preset has hundreds of editable parameters that can be individually adjusted to control the look and feel of the paint.



You can simulate natural art materials or create totally new, unique personal paint tools — wet paints that mix and smear, and dynamic brush textures that evolve under your control. The program also includes extensive animation and video-processing capabilities, wherein you can record a series of paint or image-processing operations that can then be applied automatically to individual frames of a QuickTime movie.
Synthetik Software, 888-808-4188, www.synthetik.com

Perfection in a Box

For those on the warpath for introductory scanners, check out the **Perfection 610** from Epson. This entry-level consumer scanner, which the company demoed at Seybold, offers a maximum hardware resolution of 600 x 2,400 and a maximum software resolution of 9,600 x 9,600 dpi.

This USB flatbed color scanner, which can accommodate 8.5" x 11.7" materials, takes up a minimal footprint on your desk, and costs $149. It also contains a nifty software bundle.

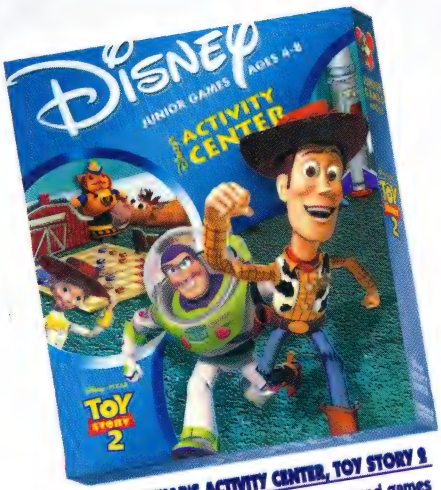
On the slightly higher end, Epson also introduced the Perfection 1200 series of flatbed color scanners: the 1200U, 1200S, and 1200U Photo. These scanners feature one-button scanning with maximum hardware resolutions of 1,200 x 2,400-dpi. The S model, which sells for $299, is for SCSI-connected Macs. The U model, which sells for $249, is targeted toward the USB Macs, and the 1200U Photo, also USB for $349, allows you to scan your photos and negatives, as well as those lovely transparencies.
Epson, 800-463-7766, www.epson.com

iBook Memories

Simple Technology has announced memory modules in 32MB, 64MB, and 128MB for the iBook. You can get what they call maximum system memory (that's 160MB) by adding a 128MB module to the system's single memory slot. The iBook comes with 32MB of soldered memory. The prices are $59 for 32MB, $119 for 64MB, and $299 for 128MB.
Simple Technology, 800-367-7330, www.simpletech.com

The Toys Are Back And Now They're On Mac!

Where the movie ends, the fun begins!

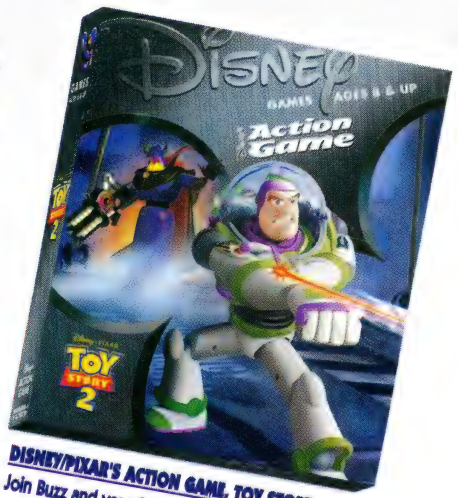


DISNEY/PIXAR'S ACTIVITY CENTER, TOY STORY 2

Toy Story 2 comes to life in six fast-paced games and creative activities for hours of hilarious fun. It's a blast for the entire family!

Disney · PIXAR

TOY STORY 2



DISNEY/PIXAR'S ACTION GAME, TOY STORY 2

Join Buzz and your favorite Toy Story 2 characters on an action-packed 3-D adventure to rescue Woody and battle the evil Zurg and his army of robots.

EVERYONE E CONTENT RATED BY ESRB

Mac

www.disneyinteractive.com, part of GO Network

Disney INTERACTIVE

Original Toy Story Elements ©Disney. Toy Story 2 Elements ©Disney/Pixar. All rights reserved.
Mr. Potato Head® and Mrs. Potato Head® are registered trademarks of Hasbro, Inc. Used with permission. ©Hasbro, Inc. Slinky® Dog ©James Industries. All rights reserved. Macintosh is a registered trademark of Apple Computer, Inc. in the U.S. and in other countries.

Click Here

Digital cameras are virtually flooding the market. And a brand new crop of them has just emerged. Well, you might say, digital cameras are great, but they don't hold enough pictures and there are always storage problems. Now, **Agfa** has introduced the **ePhoto CL30 Clik!**, a USB digital camera with a built-in Iomega Clik! drive and 40MB of removable Iomega Clik! disks. The camera, which sells for $499, has an image resolution of 1.5 million pixels and a 2X digital zoom. It features both an optical viewfinder and a 1.8-inch color LCD screen for framing and playing back your shots. It doesn't matter whether you have a fruit-flavored iMac or an older Mac, because the ePhoto CL30 Clik! has both USB and serial downloading. It will be available by December 1, 1999.

Canon has introduced the **PowerShot S10**, a 2.1-megapixel camera with a zoom lens and built-in flash. It will be available in mid October. The camera has a USB interface, but can also plug into a serial port. It has a 2X optical zoom lens and software bundle that includes Adobe PhotoDeluxe. The price has yet to be set.

There's a new entry into the digital-camera landscape from **Epson** with the **PhotoPC 850Z**, a 2-megapixel USB zoom for $799. This unit features 3X optical zoom, equivalent to a 35mm-105mm lens on a 35mm camera. It also has hot shoe for external flash units and offers 1,984 x 1,488-pixel resolution. The camera's standard built-in flash supports red-eye reduction and slow-synchronized flash. The camera also features add-on lens capability for optional 49mm close-up, wide-angle, and telephoto converter lenses and filters.

Olympus has targeted the consumer market with its **D-450 Zoom** for $499. This camera, whose dimensions measure 5" x 2.6" x 1.8", has a 1.3-megapixel resolution CCD, 3X optical zoom lens, and 2X digital telephoto at any focal length. The protective lens barrier slides open with one hand to turn on the camera and extend the zoom lens, which automatically retracts into the camera when the barrier is closed.

And for the kids, there's the digital version of the Brownie Camera, if such a thing is possible. **KB Gear Interactive** has released the **Jam Cam**, a USB camera aimed at kids, for $90. It features 640 x 480 resolution, stores 24 pictures, and comes with its own software package.

Agfa, 800-879-2432, www.agfahome.com
Canon, 800-652-2666, www.usa.canon.com
Epson, 800-463-7766, www.epson.com
Olympus, 800-347-4027, www.olympus.com
KB Gear Interactive, 612-941-1905, www.kbgear.com

Faster Print Speeds

Epson has introduced a new consumer line of printers, the **Epson Stylus Color 660**, a four-color inkjet. With the $30 rebate, it will set you back $129. This unit prints 1,440 dpi at five pages per minute for black and 3.5 pages per minute for color, and it has a 100-sheet paper tray. It also ships with a software bundle and offers a coupon in the box for a free USB adapter cable. Software drivers support Mac operating systems 7 and 8.

Epson, 800-463-7766,www.epson.com

Visor— A New Kind of Palm

If you've always wanted a Palm Pilot, but were, perhaps, put off by the high price, the new Visor handheld organizer may be right on your street.

Handspring has released a new PDA (that's personal digital assistant to you) called **Visor**, which actually runs the Palm OS. There are three versions of Visor, priced according to features. Visor Solo is $149, Visor Standard is $179, and Visor Deluxe costs $249. Mac software is included, and ... it comes in pleasing colors.

Visor's claim to fame is that it is easily customizable and expandable via an expansion slot called Springboard, into which you can attach various peripherals such a wireless modem, MP3 player, pager, digital camera, voice recorder, or whatever.

Handspring, 888-565-9393
www.handspring.com

Microsoft's New Message

Microsoft has introduced a new MSN Messenger Service for the Mac. Available for download on the Microsoft Web site (http://messenger.msn.com), you can use it to find out when your friends and family are online, hold real-time conversations, receive notifications of when e-mail arrives to your Hotmail account, and, of course, send and receive instant messages to and from one or more people.

Microsoft has integrated MSN Messenger with its MSN Mobile Services so you can even get instant messages on your cellular phone.

Microsoft, 425-882-8080,
www.microsoft.com

Before and After

We realize you're really swift with that digital camera and scanner and all, but sometimes your images don't come out quite the way you'd like them to. And that's where **PhotoGenetics** image-enhancement software comes into the picture.

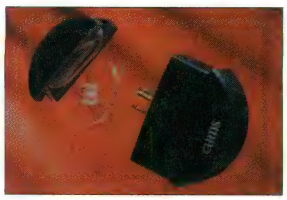
PhotoGenetics costs $40 as a CD-ROM ($30 if you download from the Internet) and can fix the ill effects produced by your flawed camera settings. Thus, you can remedy incorrect tones and overly contrasty pictures.

When an image is opened in the program, you see two versions of the image side by side — the original to the left and its variation on the right. With an interface called the Evaluator, you can apply a dozen image-processing functions at the same time, including hue gradient, sharpness, and color balance. A new version of the photo is then produced, letting you compare the two versions and choose the one you want.

Q-Research, 425-888-6609, www.photogenetics.com

On the Road Surge Cover

When you get out from behind your desk, but still need to stay connected, protecting your valuable equipment may be the last thing on your mind. But electrical surges can destroy your PowerBook as easily as your desktop unit. If that happens, you will feel very bad. But help is here.



Curtis Computer Products has introduced two new surge-protection devices: **SP150T**, an ultra-compact unit for the business traveler, and the SP250T for the small-office or student user. These protectors provide two AC outlets — the better to protect your printer, digital camera, and any other peripheral you may be using with your precious PowerBook.

The SP150T weighs 4.6 ounces, costs $25, and offers protection for two outlets and two telephone/fax/answering machine lines. Its swivel cap secures a six-foot flat phone cord. The SP250T, designed as an at-home or on-the-road product, sells for $20.

Curtis Computer Products, 800-272-2336, www.curtis.com

It's a RAID

If you're into high-volume storage, you're probably finding most of the hard drives out there a bit thin. VST Technologies has the answer for that with its new **FireRAID Array**, designed for all FireWire-equipped Macs.

The new RAID (redundant array of independent [or inexpensive] disks) array lets you store the same data in different places on multiple hard disks, thus improving performance and protection against information loss. This product was demonstrated at Seybold and will be available this quarter for a price as yet undetermined.

VST's new FireRAID tower includes custom hardware and software that allow multiple hard drives to be used together as a RAID array. The tower is tiny (measuring 9" x 4.9" x 6.8") and thus is portable. It can house up to four VST FireWire hard drives from 2GB to 14GB each. In addition, up to 16 towers can be connected together to form larger arrays.

VST Technologies, 978-263-9700, www.vsttech.com

Mouse No More

Altra has introduced the Micro Point mouseless pointing device for the Mac, which lets you scroll, highlight, and navigate more quickly and efficiently. This programmable unit, which sells for $80, is totally ergonomic and lets you customize your options. Here's how: Every point on the stationary micropad corresponds to a fixed point on your screen, which gives you more control over your cursor. Other features include three-button programmability, microcontroller, absolute cursor positioning, fingertip control, and more.

Altra, 800-210-6955, www.altra.com

Look Out! New Fonts!

Those busy bees at P22 Type Foundry are at it again. This time, they've got two new fonts: Frank Lloyd Wright and MAXFIELD PARRISH. Sold separately, each set costs $24.

The Frank Lloyd Wright font was designed by Wright for the (unbuilt) Eaglerock project in 1922. The set contains four fonts derived from lettering that later became the Eaglefeather font family. Extras are included.

The Maxfield Parrish font, produced in cooperation with the Pennsylvania Academy of Fine Arts, showcases the artist's hand-lettering styles. The set contains two fonts — Parrish Hand and Parrish Roman — and one set of extras.

P22 Type Foundry, 800-722-5080, www.p22.com

WITH ORDINARY PRINTERS, YOU SEE THE FLOWERS BLOOMING.
WITH OUR PRINTERS, YOU SEE THE LADIES DANCING.

YOU'VE GOT TO SEE IT IN EPSON COLOR.

Anyone can show you the flowers. But the textile company that created this catalogue cover wanted to show you more. Like the incredible fabrics worn by the 38 women you see here. Sheer enough to pass for petals. In a palette only nature could imagine. So what did they choose to capture all this color and detail? An Epson printer. The only one they could trust to separate the beauties from the blossoms. Which, when it comes to printers, is what separates the men from the boys.

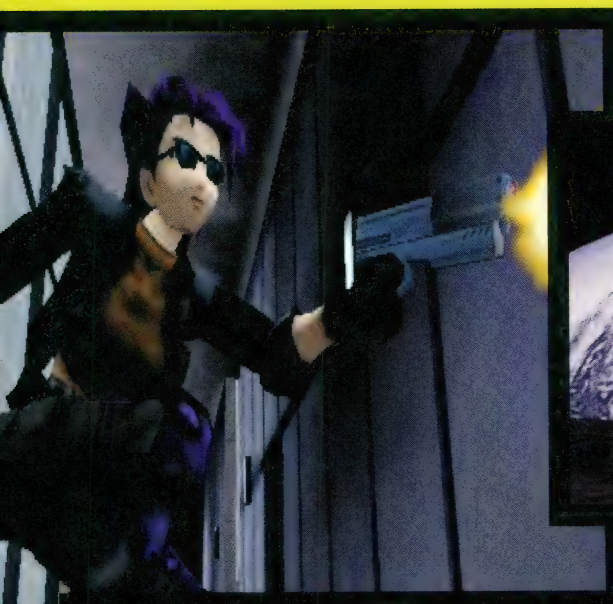
THE ONLY PRINTERS WITH EVERYTHING YOU NEED FOR ALL THE DETAIL YOU WANT.

To capture the world's most brilliant images, only Epson® color ink jet printers have the PerfectPicture® Imaging System for: 1440 x 720 dpi • Micro Piezo™ technology, for a cleaner, smaller droplet – as small as 3 picoliters • Fast print speeds – up to 12 PPM black/10 PPM color • Quick-drying inks • PC/Mac/USB compatibility. And remember, only Epson supplies guarantee Epson quality. For more information, call 1-800-GO-EPSON or visit www.epson.com.

Epson Stylus Color Ink Jet Printers.
Sheer brilliance starting at $129.*

*$129 on the EPSON Stylus Color 660 after a $30 mail-in rebate. Up to 12 PPM black/10 PPM color with the EPSON Stylus Color 900. Price may vary. Epson, EPSON Stylus and Micro Piezo are trademarks/registered trademarks of Seiko Epson Corp. PerfectPicture is a registered trademark of Epson America, Inc. ©1999 Epson America, Inc.

Big Game Hunting!



It's been almost a year since Steve Jobs announced that the Mac was back in the gaming market. And boy, oh boy, are there some goodies coming out soon. What follows is an exhaustive preview of the coolest new games coming to your Mac. Be it commercial or shareware, 3D or 2D, single player or multi player, these games should scratch your proverbial itch if ever any game could. A word of warning, though: You might want to keep something handy to mop up your drool.

No messin' around, these are the games to watch

By Alex Handy

Clan Lord (Delta Tao)

Delta Tao, creator of *Eric's Ultimate Solitaire*, has been working on its next big thing for almost two years now. That big thing is called *Clan Lord*, and it's probably the best game you've never heard of for the Mac. By now you've heard of *Ultima Online* or *Everquest*, the two big boys of online role-playing games. Both games are PC only and offer the player a fully immersive environment. They both take place in a neo-fantasy world with the standard elves and goblins. The major difference here is that instead of interacting with nonplayer characters controlled by a computer, these games are used by thousands of independent players, all competing for the position of most important character.

With that fact in mind, Delta Tao set out to create a massively multiplayer role-playing game for the Mac. The result is *Clan Lord*, a game that makes up for its lackluster graphics and simple controls in spirit and depth. At the heart of *Clan Lord* is its online community. While the game doesn't boast the flashiest graphics or the newest engine, its players are top notch and extremely friendly. Unlike larger role-playing environments, *Clan Lord* offers a much more intimate and friendly experience. It takes a complicated online gaming idea and simplifies it for the masses.

Unfortunately, the game is definitely not targeted at a large audience. Joe Williams, president of Delta Tao and creator of such great Mac games as *Spaceward Ho!* and *Dark Castle*, attributes the success of *Clan Lord* to its controlled population. "We're in this thing for the long run," says Williams, "So it's important for us to grow the game slowly, so as not to crowd the world with newbies and disrupt the community the players have built." Indeed, Delta Tao has had to turn away some new players, as they are only allowing in a set number each month. If you can't get a slot this month, you'll have to wait a few weeks.

But the wait is definitely worth it. There's never been a role-playing game with more heart and soul than *Clan Lord*. Within one week of starting my character, I had made dozens of new friends and ventured to many distant lands and strange locations. Each month the game world grows and players help determine what new stories, clans, and landmarks will be built. It all helps to create the community that makes *Clan Lord* so much fun. As Williams puts it, "Few people play *Clan Lord* to just run around by themselves. A typical adventuring party includes ten friends. And I've seen groups of over 100 characters working together for a single goal." Not too shabby for a game made on a fraction of the budget the big boys have. And for all that money spent on *Everquest* and *Ultima Online*, neither has reached the quiet brilliance of *Clan Lord*.

www.deltatao.com

Quake III Arena (id/Activision)

Hoooo, boy. This is the game you've all been waiting for. Online death matches never looked so good as in *Quake III Arena*. The dark magicians at id have been toiling and slaving over the newest installment in the *Quake* series for quite some time now, and they're finally nearing a release date. At least, that's what we hope. While John Carmack, creator of *Doom* and *Quake*, leaves the enigmatic release date as, "When it's done," the rest of us await the final word from Activision, and that word is soon — possibly even before the year's out.

But the last thing we want to do is rush what could be the most popular game of all time. Given id's past track record (*Wolfenstien 3d*, *Doom*, *Quake*) it's due for a big hit, and soon. While *Quake II* was a commercial success, it suffered from the same media polarization that *Doom II* did: Some critics thought it was the greatest thing since sliced bread, others felt it besmirched the name it carried. With that in mind, id has returned to the roots of the *Quake* series: multiplayer gaming.

Quake III Arena will be the first first-person perspective shooter to be a multiplayer-only game. Instead of a mission-based, single-player game, *Quake III* will feature only online and simulated death matches. I know, it sounds complicated, but let me walk you through it slowly. The now-classic death-match gameplay was pioneered in the original *Quake*. Players connect to a server and proceed to unabashedly kill one another with anything they can get their hands on. If you die, you rematerialize in a random location and start killing again. Whoever has the most kills at the end of a level wins. Kill yourself and you lose a point, kill someone else and you gain one. It's that simple.

So, how in the heck do I play by myself, you ask? Well, *Quake III Arena* will include a set of 'bots you can play against. These 'bots are little programs that run within *Quake III* and act just like real players. As Anna Kang, director of business development at id, puts it, "When some of the testers played against a mixture of real players and 'bots, they couldn't tell who was who." These robots even talk smack, keeping the chatter up during a game and taunting you when they stomp you into the ground.

Quake III Arena will undoubtedly take a healthy bite out of the online multiplayer-games market, especially since it's a pay once, play forever game. Unlike some other online-only games, you'll only have to buy the game at the store; there's no $10-a-month fee or any other hidden costs. If you have any interest in playing action games online, *Quake III Arena* should be your best bet.
www.activision.com

Heroes of Might and Magic III (3DO)

For a while, no one knew if this game was coming to the Mac or not. It seemed to be a perfect match, since the *Might and Magic* series had started on the Mac, and with the exception of *Might and Magic 6*, every game had been ported (a fancy way of saying that the code is converted from Windows to Mac). The *Heroes of Might and Magic* series is a perfect example of how to create a successful game. Start with an established universe with a wealth of characters and plot lines to draw from, add thought-provoking gameplay, throw in a dash of simplicity without overpowering the game's depth, and bingo — you've got a great game.

The development team for *Heroes of Might and Magic III* has learned well from its last two games. Or, rather, they haven't learned anything new. The secret behind the success of its series is sticking with what works. Of course, there'll be new characters to control, new monsters to vanquish, and bigger bad guys to confront, but the gameplay will remain the same as before. Hurray!

If you haven't entered the *Might and Magic* universe yet, you're missing out on one of the best-kept secrets of the role-playing industry. Whereas the original six games focused on developing a party of heroes and roaming the world to find treasure and fame, Heroes places you in the role of king — sort of. You're in charge of a city-state, and it's your job to vanquish all the competition in the nearby area. To do this, you must raise armies to fight alongside your chosen heroes. You can control a number of heroes, and each hero leads an army of however many troops he or she can afford.

The battle system is primitive but effective. Your forces line up across from the enemy, and each unit moves according to its speed and power. Everything in the game is turn based, and combat can be a bit hectic, despite the lack of urgency. Your heroes do not participate in battles, but they can cast spells to help or hinder combatants. Of course, you'll have to find or buy those spells, but that's where the fun is!

In each of your towns, you'll find the resources you need to raise armies. Some towns have graveyards out of which you can dig skeletons; others hold great spires to summon unicorns or dragons. The number of different units in the game is quite staggering.

Heroes of Might and Magic III is what I like to call a creeper. When you first sit down to play the game, you probably won't be blown away by it, but as time passes, addiction will slowly creep up on you until you realize it's four a.m. You might want to pick up a copy of *Heroes I or II* soon; they're great games and will really help introduce you to the world of *Might and Magic*. You'll need to prepare, because *Heroes III* will probably take over your life.
www.3do.com

Unreal Tournament (MacSoft)

No, Olivia, *Quake III* is not the only online, multiplayer, first-person perspective shooter. There's also *Unreal Tournament*, the sequel to one of the most misunderstood games out there. Poor *Unreal* — it was such a beautiful game but so badly produced. Epic Megagames shoved it out the door months before it was ready. The result was a buggy game that looked better than anything ever produced. The graphics dazzled, but the gameplay didn't do them justice, and the code was just not ready. In fact, it's only recently, a full year after the game was released, that the code can finally be called finished. Westlake Interactive did a fabulous job of porting all the patches, but Epic Megagames, the PC creators of the game, was simply too caught up in its own hype to care about the gamers.

Well, times have changed. While *Unreal* can be called a commercial success and a landmark title in the history of video games, it's also considered to be a sign of the times, a symbol of the loss of quality control on products in an overly competitive market. Well, after playing *Unreal* with all the updates,

Spend the Holidays in the City.

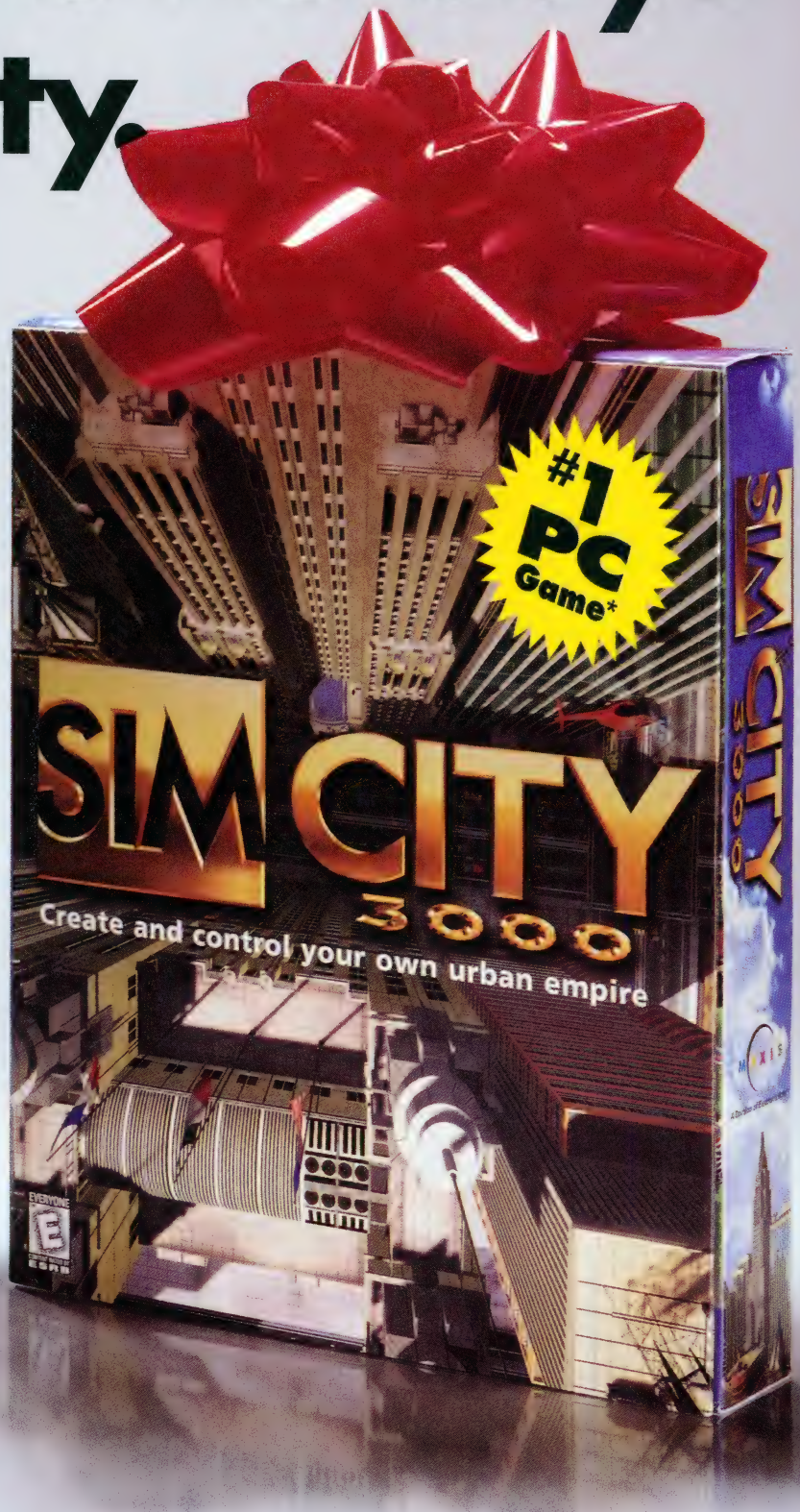
"Great Family Fare"
— US News and World Report

"Addictively Good"
— USA Today

"Sim-sational"
— PC Magazine

It's the ultimate power trip. *SimCity 3000* puts you in charge of an entire city. You build it. You manage it. You can even destroy it. Then you deal with the consequences. With all-new features like landmarks from famous cities, more disasters and a high-powered zoom that brings you closer to the action, *SimCity 3000* is the gift that brings the city to you.

For your keys to the city visit
www.simcity.com

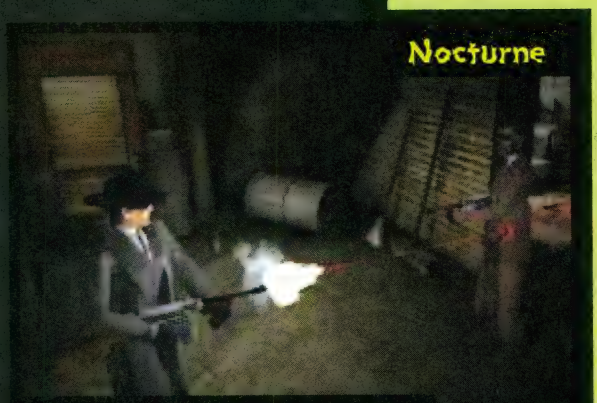


MAXIS
A Division of Electronic Arts™

© 1999 Electronic Arts Inc. SimCity 3000, Maxis, the Maxis logo and Electronic Arts are trademarks or registered trademarks of Electronic Arts in the U.S. and/or other countries. All rights reserved. All other trademarks are the property of their respective owners. *Source: PC Data (January—June, 1999 Database reflects retail sell-through numbers.)

PC Mac

EVERYONE E CONTENT RATED BY ESRB



Unreal Tournament is looking better and better. Multiplayer *Unreal* is fun. Very fun. And *Unreal Tournament* is even more fun. Unlike *Quake III Arena*, *Unreal Tournament* focuses on teamwork and group communication skills. It's taken the gaming industry many years to realize that gamers like to kill each other, but they also love to work together to kill each other. This is a lesson that Epic has taken to heart.

Using the same play structure as *Quake III Arena* ('bots for single-player mode), *Unreal Tournament* will add many new twists on the capture-the-flag theme. While *Quake III Arena* includes capture the flag, *Unreal Tournament* will have much more elaborate maps. One level takes place on a speeding train. The flag belongs to the blue team and is located in the locomotive. The red team starts at the rear of the train inside a helicopter speeding alongside the tracks. You'll have to fight inside and outside a string of railroad cars to get to the front.

Mark Adams, who is porting *Unreal* to the Mac for Westlake Interactive, says the *Unreal Tournament* graphics engine is full of surprises. "Having worked with *Unreal* for nearly two years you'd think I'd seen it all!" he says, "but there have been several instances in *Unreal Tournament* where I saw something that just blew me away, Mostly in the level design and graphics effects."

Other maps should be just as compelling. *Unreal*'s gameplay has always been slower than *Quake*'s (not a bad thing), and it requires different strategies. Since ammo tends to be sparse and weapons do more damage, *Unreal*'s gameplay moves with much more caution. Stick your head around a corner, and it might just be taken off. Teams will have to work together like a SWAT team, clearing rooms and watching each others' backs. And, oh, what beautiful backs those are!

Unreal Tournament sports a new graphics engine, and it's absolutely gorgeous. You can actually customize your character's facial features. Skins are smooth and well done, and the transparencies and shadow effects are jaw dropping. Of course, you probably won't get much of a chance to see them since you'll be hurtling towards the front of that train with an eight-ball gun in your hand.

www.wizworks.com/macsoft

Nocturne (Gathering of Developers)

If you've ever seen a Sony Playstation, chances are you've heard of *Resident Evil*. It's one of the better games on that system, and it has everything a veteran gamer looks for in a hit title. Capcom, the company that published *Resident Evil* (as well as the *Street Fighter* and *Mega Man* series of games) calls *Resident Evil* a "survival horror" game. *Nocturne*, from Terminal Reality, one of Gathering of Developers' (or GOD, as they call themselves) prize development houses, should give *Resident Evil* a run for its money. Using the same interface and perspectives, *Nocturne* attempts to bring the joy of the *Resident Evil* series onto your Mac.

If you haven't seen *Resident Evil*, it's best described as an interactive slasher movie. Your character has to deal with hordes of zombies inside an old mansion, with nothing but your handgun and your wits to defend you. *Nocturne* builds on this idea and adds many new twists to it. To start with, the graphics in this game kick major butt. Your character, the Stranger, wears a long flowing overcoat that is rendered impeccably. It flaps in the wind and gets tangled in itself while you pump Tommy gun rounds into another undead baddie. The game takes place in the late '20s and early '30s, taking full advantage of the H. P. Lovecraft feel of the era.

You'll also be traveling around the world to Germany, the wild west, and many other interesting places. All the while, you'll have to contend with all manner of supernatural beings, such as werewolves, vampires, and brain-eating zombies. There are even some beautiful women for you to partner with, although the characters that will assist you aren't quite fleshed out yet.

What *Nocturne* brings to the table is a profound sense of fear. Some scenes take place in complete darkness, with only the muzzle flash of your gun to illuminate your foes. The setting also helps to create a sense of foreboding every time you turn a corner. This is the trademark of survival-horror games; *Resident Evil* used to give me heart palpitations whenever I entered a dark room that appeared empty. Of course, if you've seen any horror movies, you know that there's always something in the box, behind the door, under the bed . . . .

www.godgames.com

Mechwarrior 3 (MacSoft)

Mechwarrior 2 was great — from the music to the graphics, to the feeling you'd get when you waltzed into town in a 100-foot-tall robot of doom. *Mechwarrior 3* is going to be even more fun. Already the game has hit on the PC side, and it's making major waves. With 16 different Mech (that's what the giant robots are called) chassis and over 35 weapons, the honor of your clan will be defended in combat once again. And what a glorious battle it shall be!

Mechwarrior takes its world from the FASA (that's a roleplaying game company, much like TSR or Wizards of the Coast) table-top role-playing game. Originally, the game was about

EXPAND YOUR HORIZONS

The Next Generation of the Greatest Strategy Game Series of All Time

CIVILIZATION
CALL TO POWER

CALL TO POWER ADVANCEMENTS

All-new strategies, including unconventional warfare · More units, buildings, Wonders and technologies · Vast new realms: Space and Sea
Fully-animating, hi-res, 16-bit graphics · Breakthrough time-saving interface · Enhanced diplomatic and trade options
Internet and LAN Multiplayer · All-new Wonders of the World in stunning cinematics

AVAILABLE IN STORES SOON!

EVERYONE E CONTENT RATED BY ESRB

Mac

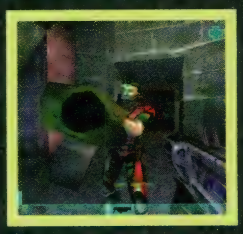
ACTIVISION®
www.activision.com

westlake INTERACTIVE

Civilization: Call To Power © 1999 Activision, Inc. Activision is a registered trademark and Call To Power is a trademark of Activision, Inc. CIVILIZATION computer games © 1991-1998 Hasbro Interactive, Inc. (successor to MicroProse, Inc.). MICROPROSE and CIVILIZATION are U.S. registered trademarks of Hasbro or its affiliates. This product is made and sold under license from Hasbro Interactive. All rights reserved. Published and distributed by MacSoft, a GT Interactive Software Company. All other trademarks and trade names are the property of their respective owners.

MacSoft®
A GT Interactive Software Company
www.wizardworks.com/macsoft/

The Amazing Carmack



John Carmack is the father of modern gaming. He created *Wolfenstien 3D*, *Doom*, and *Quake*. He's The Man in the games industry — the guy who everyone wants to be. His company, id Software, has ridden the turbulent seas of the video-game industry since the late 1980's and has found success like no other.

We asked John a few questions about the Mac, *Quake III Arena*, and hockey-puck mice.

MacHome: Aside from the mouse, what's still wrong with the Mac for gaming?

John: Two button? How about three? At least with it being USB, you can just go grab your mouse of choice. This is a Good Thing for Mac users. I use a Microsoft Intellimouse on my G3.

I think the B&W G3 desktops are fine gaming machines. They aren't as fast as the best of the Wintel machines, but there is nothing about them that is cause for complaint from a system hardware standpoint. The remainder of the current product line still uses Rage Pro graphics chips, which aren't really good enough for serious gaming. They can get a lot better than they currently are, because most of the tuning effort has been focused on the Rage128 so far, but in the end, it is just a fairly slow, low-quality rendering chip. I'm sure Apple has plans to move better graphics out on all products, but I was fairly disappointed to see the brand new iBook still with Rage Pro-based graphics. It will be better than in the iMac and professional notebooks due to the AGP texturing, but still nothing to write home about.

I am looking forward to testing the new G4 machines. From a developer's standpoint, developing for OS 8/9 is a large step backwards from working on Windows NT. I am quite looking forward to moving all of my Mac work to OS X. It is my intention to NOT support OS 8/9 with our next product, only OS X.

MacHome: What's it like trying to wade through all the *Quake III Arena* test input you're receiving? Have the testers been as helpful as you'd like?

John: Most of the mail gets filtered by someone else here, but of the mail that I get personally, there are still worthwhile things to be gained after getting past the content-free ones. I usually get at least one or two a day that make me at least consider something. My overall impression seems to be that we are delivering a product that people are enjoying.

MacHome: What prompted the change from elevators to jump pads?

John: Changing elevation is important for the flavor and tactics of these types of games. Losing elevation is fast and easy — you fall off something. The most obvious way to gain elevation is to walk up a slope or set of stairs. This often works, but it limits how much elevation you can gain with a given amount of floor space. Lifts can be made as fast and small as you like, but they have the problem of only allowing one person at a time (usually) to use the lift, which can cause people to have to wait around for it to return. We feel that is bad for gameplay.

We experimented with ladders in *Quake 2*, but that was fairly universally disliked for deathmatch. I think the bounce pads have worked out great. You can get both high and far with them, and continue fighting as you are flying through the air. They also add color and character to a lot of the levels, although some people find that this makes the game feel less gritty and serious.

MacHome: Do you think *Quake III* will be turn video games into a spectator sport?

John: I don't think there will be an incredible breakthrough, but I do expect these types of fast action, competitive games to steadily increase in their "watchability."

customizing a big robot and beating the snot out of each other with it. The computerized version turned up the clan aspect of the game and focused on the war between two honorable groups of robot pilots. This time around, there's more of everything. The graphics are better, there are more clans to worry about, and the music should be killer.

But what about online play? So far, the critics are calling *Mechwarrior 3* a fun game that's hampered by a short set of single-player missions. Evidently, the focus on multiplayer action was a bit too much for some critics. But with *Unreal Tournament* and *Quake III Arena* coming out soon, MacSoft shouldn't be too worried about this. The *Mechwarrior* series has always been able to count on the support of its die-hard fans, and hopefully, this release will crank up its numbers.

Mechwarrior is a great series, and I urge you to try the original (the original is actually *Mechwarrior II*. The first game was nothing like these two.) It's one of the few games out there that allows you to "build your own boat" as some players put it. Your missions are laid out for you, but you get to choose what you'll pilot. You can customize your Mech in dozens of ways, from adding heat sinks to keep your lasers cooled off, to placing missile launchers on your arms. There's a fine art to customizing a Mech, and it's akin to fixing up an old Chevy in some ways.
www.wizworks.com/macsoft

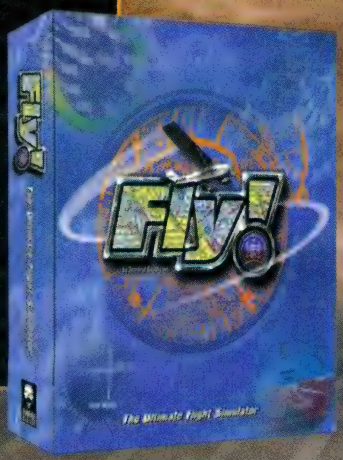
Oni (Bungie)

Myth. Marathon. Myth II. What do all these games have in common? Excellent story lines. Oh, and they were all done by

"BEST FLIGHT SIM OF 1999"

All Games Network

The ultimate flight simulator for beginners to experts



You have been cleared for takeoff with FLY!, the most realistic general aviation simulator ever created for the PC. Fully modeled, fully functional cockpits. Global navigation with over 16,500 navaids. Advanced avionics. 50,000 square miles of satellite scenery. Integrated flight planner.

From this point on, your only point of reference will be reality.

- Fully modeled, fully functional cockpit
- Incredible satellite imagery
- Global flight area with accurate elevation model
- 5 3-D cities
- Volumetric clouds where the opacity varies
- Enjoy flight parties with up to 8 friends

CREATED BY

TERMINAL REALITY

www.ifiytri.com

Published By

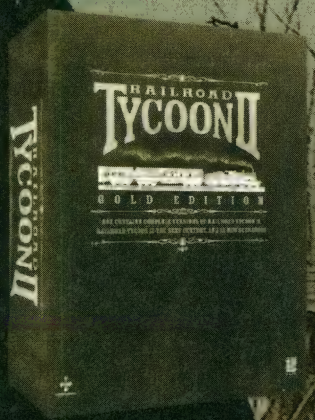
TWO GREAT GIFTS FOR DAD

Available in stores nationwide or order direct @www.godgames.com

"BEST STRATEGY GAME OF 1999"

Computer Games Strategy Plus

Includes full version of Railroad Tycoon II, Railroad Tycoon II: The Second Century, the complete strategy guide, plus 12 all-new scenarios



All aboard! Railroad Tycoon II Gold combines the complete versions of Railroad Tycoon II- The Second Century, plus twelve all-new scenarios. Work your way up the ranks of the railway industry. Lay tracks on every continent as you grow with the expanding world market.

Prove yourself to be a mogul to be reckoned with.

- Sophisticated stock market with buying margin, short selling and hostile takeovers
- Over 45 Scenarios ranging from building the Transcontinental railway in the 1800s to supplying the Allied forces during WWII to building the Chunnel

CREATED BY

T POP P

PopTop Software

www.poptop.com

Bungie. It's a good sign if you find yourself playing a game simply to find out the who-dunnit. Bungie has made a career out of doing just that: making story-driven games that play like a dream. *Oni* should stand to solidify that fact.

Set in a dark and Anime-like future, *Oni* features a lithe little protagonist named Konoko. If her purple hair and skin-tight body armor aren't enough to interest you, her repertoire of moves will knock your socks off. The game plays like a combination of *Tomb Raider* and *Street Fighter*. Konoko swings herself all over, using guns or just her fists to knock the bad guys on their rears.

The action is fast, and the game's engine is even faster. The levels are so complex and vast that Bungie used CAD programs to design them. This will mark a Bungie first: There will not be any map-making tools included with *Oni*. But when you think about how intricate the levels are, it makes sense. These buildings and areas have been designed as if they were real. Gameplay uses this to an advantage. Konoko can be found charging down corridors, guns blazing, or diving behind a desk to get out of a blast.

Bungie's Doug Zartman said the complex storyline will complement the intricacies of the gameplay. "There are more twists and turns in the *Oni* story, more of a thriller structure to it than there was in *Marathon* or *Myth*," he explains. "While the main character in *Marathon* was a nameless, faceless solider, alone among rampant, screaming monsters, and the narrator of *Myth* was also anonymous, players have a name and face for Konoko. They will likely identify with her to a greater extent as her world crumbles around her."

As for the influence of existing games, Zartman explains, "We're always influenced by other games, though if we're making something with a lot of original technology and gameplay ideas, it's more a matter of 'let's avoid that problem that X had' rather than 'let's copy that cool feature.' There's a core set of problems shared by many third-person games that *Oni* set out to fix, like making the camera move intelligently in confined spaces, making the character's movement fluid or making it easy to aim when you're not looking through their eyes."

Another big departure for Bungie is the limited multiplayer support. In a time when others are building online-only games, *Oni* will only work across a local network. Why? The game is too fast for Internet play. Once you've seen the martial arts-influenced fighting going on with a few people, you'll understand why. *Oni* isn't a multiplayer game; it's a single-player experience. If Bungie works its magic again, *Oni* could be the most deeply immersive game ever. Knowing Bungie, the game probably has more plot twists and turns than your average soap opera. I wonder if the butler did it.

www.bungie.com

Halflife (Sierra)

Lawdy Miz Clawdy, this game rocks. If *Marathon* were to have fully 3D spiritual descendent, this would be it. With a story that surpasses Hollywood in originality and intrigue, *Halflife* stole every major award the games industry could muster. Everything about this game rocks major buttocks. It's got graphics to dazzle your eyes, music to make you boogie, and puzzles to twist your brain into a gelatinous goo.

The plot is as complex as any sci-fi movie. You've stumbled into the middle of a military experiment gone wrong. Horrible creatures are taking over a research facility, and the government is pulling X-Files duty. The Marines have arrived and are wiping out everyone in the complex to keep them quiet. Consequently, you not only have to deal with hideous monsters from another dimension, you have to fend off our boys in uniform at the same time. On top of that you have to keep those nerdy scientists alive. Geez, what's the fun in that?

Halflife features an advanced graphics engine, similar to the one Bungie's working on for its newest project, *Halo*. The engine uses actual skeletal structures to hold its polygonal people together. Thus, all the characters in the game will look like real humans, as opposed to some sort of overweight, out-of-proportion bag of rocks. The motion capture used to animate the characters keeps the graphics crisp and realistic, adding to the realism of the game. Throw in a hearty helping of mind-bending puzzles and tough sci-fi grit, and you've got an evening's work cut out for you. This is one game you will play through to the finish.

While the main character in Marathon is a nameless, faceless, soldier, alone among rampant, screaming montsers, and the narrator of Myth was also anonymous, players have a name and a face for Konoko. They will likely identify with her.

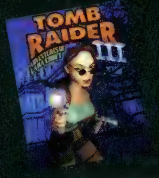
The weapons in *Halflife* are nothing short of brutal. My personal favorite is the Snark, a small bug-like alien that you

Aren't you tired of explosions, big guns and special huge effects?

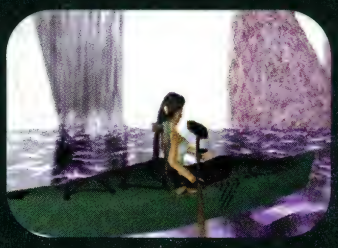
Neither are we.

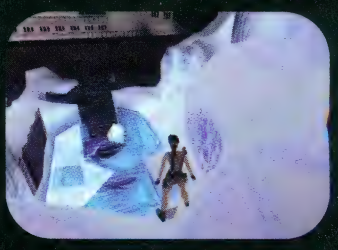
EIDOS CORE westlake INTERACTIVE ASPYR

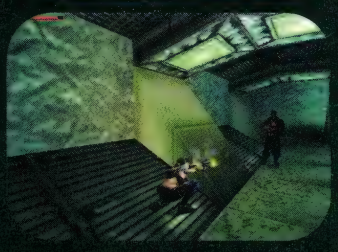
Eidos, Eidos Interactive, the Eidos Interactive logo and Tomb Raider are all registered trademarks of Eidos Interactive, Inc. © 1999 Eidos Interactive, Inc. Lara Croft, the Lara Croft likeness, Core and the Core logo are all trademarks of Core Design Ltd. © 1999 Core Design, Ltd. The Aspyr logo is a trademark of Aspyr Media, Inc. The Westlake Interactive logo is a trademark of Westlake Interactive, Inc. All other trademarks are the property of their respective holders.



NOW for the MAC!

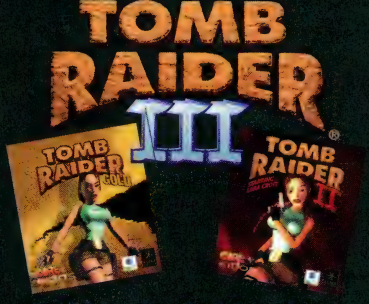






That's why we're bringing you Lara's biggest adventure to date in Tomb Raider III!

If you're a loyal fan of Tomb Raider Gold and Tomb Raider II or just share the same sentiments about sexy, English-accented gun-slinging women, then you've got to check this out. New puzzles, environments, and even a few old enemies, like the infamous T-Rex await you. From the jungles of India to the icy wastes of Antarctica, across the rooftops of London and into the depths of Nevada's mysterious Area 51, Lara is ready for anything. Are you?



Tomb Raider Gold, Tomb Raider II, and NOW Tomb Raider III are available at:

COMPUSA THE COMPUTER SUPERSTORE

and at other fine Mac retailers or contact us

1-888-212-7797

www.aspyr.com

can use like a heat-seeking grenade. The only difference is that these grenades bite. If you hold one too long, your character will attempt to pet the Snark but be met with an open mouth and a sharp beak. There's no escaping a well-placed Snark. And try as you might, there will definitely be no escaping *Halflife*.
www.sierra.com

If you like football, you'll be in hog heaven, even if you're not a Redskins fan (I am). The playbooks are filled with tons of real plays; everything from the Hail Mary to the Statue of Liberty play is here. You can fake out the defense by running screens, throwing flee-flickers, and even doing an option play. You can also call audibles from the line to switch gears on the other team. But if these plays aren't enough, you can write your own plays and pummel the opposition with them.

And who controls that other team is up to you. *Madden 2000* will have full TCP/IP network play, for both Mac to Mac and Mac to PC. If your Internet connection is too slow, however, you can use the "Coach & Click" mode, where you choose the plays and players, and the computer controls your men. This game is so much fun, you don't have to know anything about football to enjoy it. Blue 32, look left, look right, up, down, hut, hut, HIKE!
www.aspyr.com

Madden 2000 was shown at Macworld New York in a beta version, and it looked fabulous. You control your players with impeccable accuracy, sending Emmet Smith diving over the 10-yard line, or having Sterling Sharpe spin his way through a block.

Madden 2000 (Aspyr)

Are you ready for some football?! Yes! We finally have a football game coming to the Mac, and it couldn't be a better choice. The *Madden* series originated on the Sega Genesis and turned the once-awkward genre of sports games into an industry unto itself. The combination of real players and smart playbooks was a hit with sports fans. And now, you can't get any closer to a football game without actually going outside.

Madden 2000 was shown at Macworld New York in a beta version, and it looked fabulous. The gameplay, even at that early stage, was phenomenal. You can control your players with impeccable accuracy, sending Emmett Smith diving over the 10-yard line, or using Sterling Sharpe to spin his way through an oncoming block. The graphics are crisp enough to read the names on the backs of player's shirts, and each player looks like his real life counterpart.

What Else?

There's lots more coming other than these, but we can't list everything due to space. Here's a quick roundup of the best of the rest.

Aliens vs. Predator, the first person shooter from Fox Interactive (*www.foxinteractive.com*) should be out soon. You can play the invisible Predators, the ravenous and fast Aliens, or the heavily armed humans.

Blue Byte (*www.bluebyte.com*) is working on *Settlers III*, the sequel to their flagship line. *Settlers* is a huge hit in Europe, and the third installment should show us Yankees what's it's all about. This real time empire-building game should tickle the fancy of any *Civilization* fan.

From Logicware (*www.logicware.com*) comes a whole slew of cool stuff. *Interstate 76* is a game of car customization, Mad Max action, and funky tunes. Put on your bell bottoms and strap in; it's gonna be a funky ride. Also coming is *Heretic II*, a *Tomb Raider*-style game of magic and fantasy. Finally there's *Zork: Grand Inquisitor*, the third installment in the graphical Zork adventures.

Aspyr and Westlake Interactive (*www.westlakeinteractive.com*) are hard at work on *Alpha Centauri* and *Tomb Raider III*. The latter is a romp through more of what makes the *Tomb Raider* series fun: obstacles, puzzles, and Lara. *Alpha Centauri* is the game that your spouse will hate. It's going to keep you up to all hours of the night. The true sequel to *Civilization* and the first game from Sid Meier in a long time, *Alpha Centauri* is a turn-based strategy game that charges you with the duty of colonizing a new planet while dealing with rival factions attempting to control the planet first.

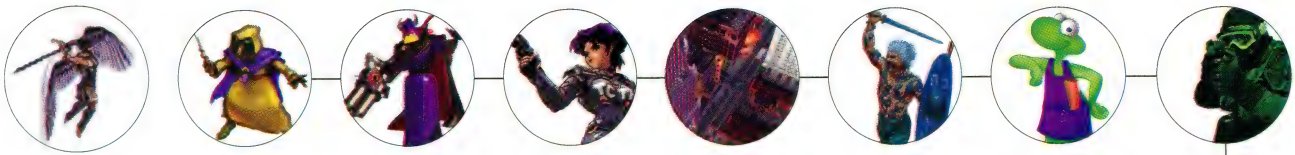
Green Dragon (*www.greendragon.com*) is wrenchin' on *Trouble with Toolbots*, the next chapter in their *Gridz* line. It's an adventure/puzzle game that will feature many new toolbots as well as your old favorites from *Gridz*. If you haven't seen *Gridz* yet, go out and buy a copy. It's pleasantly addictive and energetic.

And Blizzard (*www.blizzard.com*), as you've no doubt heard by now, is hard at work on *Diablo II*. This is HUGE. It will be a bigger, badder version of the role-playing game of the year. But what you may not have heard about is *Warcraft III*, a fully 3D version of its flagship product. I can't wait to hear the cries of battle once again.

For you board-game fans, MacSoft will be bringing *Monopoly* and *Scrabble* to a screen near you. Both will feature network play, so you can argue with someone in Saskatchewan about placing "quixotic" on the triple-word score.

If you've been good, Santa might just bring you one of these this year, though he might have to break into a few development studios to get you a copy. But we have a feeling he won't get caught. MH

Bugdom and Nanosaur are trademarks of Pangea Software, Inc. ©1999 Pangea Software, Inc. All logos are trademarks of their respective owners.



Win the iBook

plus 50 other great prizes!

Introducing MacHome's biggest ever Macintosh Entertainment Treasure Hunt!

Your map: The cover of MacHome's November 1999 issue.

Treasure Hunt Headquarters: Go immediately to www.machome.com/fun for links to all participating Websites.

Your mission: Name each of the game characters that appear on the cover of this issue along with the game they star in. More details can be found at www.machome.com/fun

Enter here

www.machome.com/fun

Sponsors

Abject Multimedia • Ambrosia Software • Aspyr Media Bungie • Disney Interactive • Electronic Arts • Gathering of Developers • Graphic Simulation • Green Dragon Humongous Entertainment • MacHome • MacSoft MacZone • Pangea • Vtech Software • Spider Web Software • Simon & Schuster • The 3DO Company

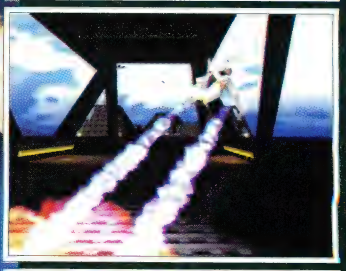
Official Rules

1. ELIGIBILITY: Open to legal US residents 18 years of age and older. Employees of MacHome and their immediate families are not eligible. Void where prohibited. 2. PRIZES: On or about January 5, 2000, random drawings will be conducted from among all eligible entries received by 12/31/99. The following prizes will be awarded: one (1) grand prize: an iBook. No substitution or cash equivalent for the grand prize will be offered. Approximate retail value: $1,699.00. Fifty (50) runners up prizes consisting of one software title provided by companies sponsoring the treasurehunt. Winner will be notified by phone. Odds of winning will be determined by the number of eligible entries received by the deadline of 12/31/99. 3. TO ENTER: Fill out the contest form located at www.machome.com/fun 4. Winners List: Winners' list will be published on the Contest page February 1, 2000. One entry per person.

macZone

1-888-783-2603

DESCENT 3™



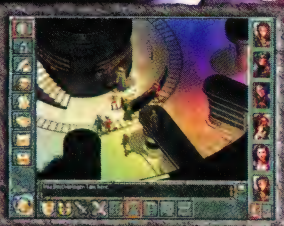
DUAL-ENGINE GAME TECHNOLOGY
New Fusion Engine blasts you seamlessly from inside to outside.

CUNNING ROBOTS & MERCILESS WEAPONS
From bold and brutal to cautious and shy, virally infected robots that use their brains as well as their bullets.

TRUE RADIOSITY AND SPECULAR LIGHTING
Specular and reflective surfaces allow for incredible special effects that portray Descent 3 in an all new light.

Requires hardware graphics support found in all current iMac and G3 computers (RagePro or greater graphics with 6 MB of video RAM).

Baldur's Gate™

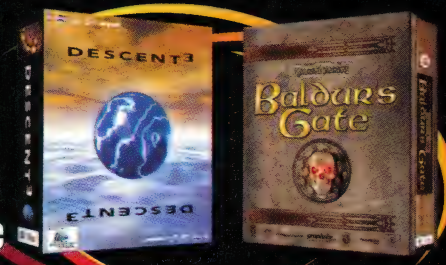


SET IN TSR's FORGOTTEN REALMS
The most popular and longest running of the Advanced Dungeon & Dragons roleplaying game world.

GRIPPING NON-LINEAR ADVENTURE
Dozens of subplots that branch out from the main scenario. Your decisions affect the entire game world as a whole.

HUGE GAME WORLD
Multi-CD set filled with nearly 10,000 scrolling game screens.

OFFICIAL TSR Licensed Product



COMING SOON!!!
TWO GREAT NEW GAMES FOR YOUR MAC

FORGOTTEN REALMS

graphsim.com
GRAPHIC SIMULATIONS CORPORATION

All copyrights and trademarks are the property of their respective owners.

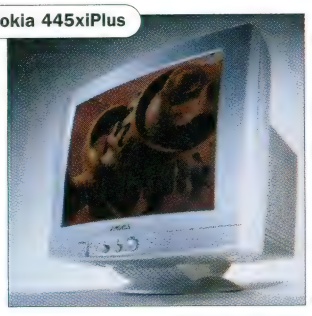
Philips Brilliance 201B

ViewSonic P815

Miro Displays Radius XL-2

Apple 21" Studio Display

Nokia 445xiPlus



Panasonic ProP100

Livin' Large

21" Monitors Compared

This could go big. Big as all outdoors. Well, maybe not that big. But just as we humans have a natural tendency to build gigantic palaces to unseen forces, there is a certain desire among computer users to obtain the largest, most-impressive monitors that one can afford. After all, your monitor is your main link to your computer.

A large monitor lets you do many things. You can increase the resolution of your screen (say, from 640 x 480 to 1024 x 768) so that you can squeeze more icons and folders onto your screen. Try this with a small monitor and you'll be squinting mightily. And of course there's the old spreadsheet problem — the larger the monitor, the more cells you can see. If you can afford it, and you have enough space on your desk to accommodate it, it makes perfect sense to get one.

Of course, the former consideration — cost — is often what holds people back. Once folks bask in the warm and toasty glow of a large monitor, however, they often want one for themselves. But they are not cheap by most standards, ranging from $849 to $1,499 for the models we looked at — and these represent the lower to middle range of such products. As is often the case with computer equipment, prices tend to decrease over time, and that adage holds true with monitors. What cost several thousand dollars a few years back is now available for, oh, half as much, generally speaking.

On to the Monitors

We looked at 11 of these large 'n' lovely devices, which is a lot of monitor to surround oneself with. These included the Apple Studio Display, which is unique among the crop as it is the only one with the blue-and-white casing to match the Power Mac G3 (though there is now a slate-colored version of this monitor, which matches the Power Mac G4) and has special calibration software just for Mac. There's also the Radius XL-2, the Philips Brilliance 201B, ViewSonic's P815, Samsung's SyncMaster 1000P, and Nokia's 445Xi Plus. Rounding out the field are multiple entries from Panasonic, with the PanaSync S110 and E110 and the Pro P110, and Mitsubishi, with the Diamond Pro 2020U and the Diamond Plus 120U. (Special bonus: Each of these monitors, particularly the Apple, ships in a box so big you can easily make a fort out of it. Or a dog house.)

If you noticed the "u" in Mitsubishi's products' names, good eye! That stands for "USB Ready," and as it turns out, these and several other monitors we tested have built-in USB ports. Handy indeed, if you've got a newish Mac and the attendant cadre of products that use USB (Universal Serial Bus). We should note here that "newish" doesn't apply to iMacs or iBooks; these machines work only with their built-in screens.

These monitors all connect to a VGA (video graphics array) port, a 15-pin connector that is standard equipment on new blue-and-white G3s, older G3s, and PowerBooks. Older Macs, including the beige G3 models, usually have a Mac-specific video-out port that also

uses 15 pins, but in a different configuration. This port will work with any VGA monitor with the help of a handy Mac-to-VGA adapter, of which various models are available, usually priced from $15 to $25, at computer stores.

Additionally, most of the monitors we tested included BNC (Bayonet Neil-Concelman ... now you know) connectors in addition to the VGA port. This is a type of connector used largely by graphics professionals, particularly in video production. It separates the VGA signal into constituent parts — red, blue, and green video, as well as horizontal and vertical synchronization, with separate inputs for each. Most users needn't concern themselves with BNC, as the monitors work just fine with the VGA connection. But it's nice to have it there just in case.

Is a Monitor Just a Monitor?

Lest you think monitors are simply monitors, be aware there can be some significant differences between models, with two important distinctions in particular. Like most monitors except for flat panels, the ones we've looked at are based on cathode-ray tube (CRT) technology, wherein electron guns emit blue, red, and green electrons onto the phosphors lining the back of the screen to create an image.

But before the electrons reach the back of the screen, they must first traverse one of two gauntlet types before forming the image. The first type is called *shadow mask*, and it's a thin sheet of metal full of tiny holes through which the electrons pass. The other type is called *aperture grille*; this fulfills the same purpose as the shadow mask but is characterized by fine vertical wires which create slots or stripes through which colored beams of electrons pass. Monitors with aperture grilles tend to be brighter and sharper, while their shadow mask counterparts are a bit dimmer and not as crisp. Shadow mask displays tend to be less expensive.

Much of a monitor's sharpness is determined by an obscure little measure called dot pitch, which, as its name implies, refers to the leeeetle teeny dots

But Are They Easy?

As with any other consumer appliance, a monitor's ease of use is subjective. Some people really like (and need) lots of controls and options, while others are satisfied with a set-up that's user friendly and doesn't take a rocket scientist to figure out.

The monitors we tested spanned the range from completely user friendly to less intuitive than we'd like. Overall, we were pleased with the flexibility and the abundance of controls afforded us by these advanced monitors. *(Ratings out of five possible apples.)*

Mitsubishi Diamond Plus 120U/Diamond Pro 2020U
We had no problem figuring out how to adjust the settings on these units, and the two models functioned the same way. Hitting the scroll button, or any of the four buttons at the front of the screen, puts the monitor into adjust mode. Submenus are accessed via the + and - signs, which let you fine-tune the display. 🍎🍎🍎🍎🍎

Philips Brilliance 201B
This was the most difficult to adjust of all the monitors we tested. A rotary button underneath the front of the monitor gives you a menu that lets you navigate by pressing the On Screen Display button and then scrolling through the button choices. Getting a firm grip on the controls we wanted was difficult, and the control sequence was confusing. 🍎🍎

Radius XL-2
What keeps this monitor's controls from being as intuitive as we'd like is that there is no starting point. There are separate degauss and factory-reset buttons on the front, which is good. But with no overall menu, you have to keep clicking to find the setting you want. The submenus and + or - adjustments are simple. 🍎🍎🍎

Nokia 445XiPlus
Adjusting this monitor was a cinch. Separate controls govern brightness and contrast. Then, all you have to do is depress the Menu wheel to get the menu. Turn the wheel to adjust the settings. Press the wheel when you're finished. 🍎🍎🍎🍎🍎

Panasonic PanaSync S110/E110/ProP110
The controls on these three models were all the same and fairly easy to figure out — nothing cryptic or hard to understand. One key displays the icon-based main menu, two arrow keys let you make adjustments and scroll, and a second key lets you select menu items and also displays the submenus of selected items. 🍎🍎🍎🍎🍎

Apple 21" Studio Display
There isn't much in the way of hardware controls for this monitor, except for the brightness and contrast settings. Most other adjustments are made by the software through the Control Panel. We found the operation and adjustment procedures for this unit more complex than for Apple's 17" monitor. 🍎🍎🍎

Samsung SyncMaster 1000P
The controls on this monitor are fairly straightforward. A Menu button takes you to the main menu, and a separate Exit button closes an active menu and takes you to the previous level or shuts the menu off. 🍎🍎🍎🍎

ViewSonic P815
The ViewSonic is very easy to adjust. Basically a two-button operation, button one displays the menu and facilitates finding the controls, and button two locks the menu in place as you use the arrow keys to fine tune the monitor. 🍎🍎🍎🍎🍎

What Does It all Mean?

Aperture Grille: A newer CRT technology that is a variation of the shadow mask (see separate entry). An aperture grille is a series of fine vertical wires that create alternating red, blue, and green slots or stripes through which the electrons pass on their way to the phospors. Such monitors are vertically flat and curve only horizontally.

Cathode Ray Tube (CRT): A vacuum tube with a large flat surface coated with phosphorescent material on the inside. A color CRT consists of several components: three electron guns (red, green, and blue) that generate beams of electrons, anodes that accelerate the electrons, and two sets of deflecting coils that produce an extremely low-frequency (ELF) electromagnetic field. Images are produced when electron beams strike the phosphorescent surface. Most computer monitors are CRTs. There are two main kinds of CRTs — shadow mask and aperture grille (see separate entries).

Dot Pitch (also called phosphor pitch): A measure of the size of a pixel. The dot pitch is the distance between two dots (or stripes) of the same color (red, green, or blue), measured in millimeters. This measure tells you how sharp the displayed image can be. Dot pitch is measured differently for shadow-mask and aperture-grille CRTs (see separate entries). But generally, look for measurements between .28 mm and .22 mm, wherein the lower number signifies the sharpest and finest display.

Hertz (Hz): A unit of electromagnetic frequency of one cycle per second, used in reference to a monitor's refresh rate. The faster the rate, the less annoying flicker you will see.

Maximum Resolution: The total number of pixels that a display can load onto a screen.

Phosphor: The material with which monitor screens are coated on the inside. Three colored "guns" at the back of the monitor shoot streams of electrons at the screen. The phosphors "glow" when hit by the electrons. The combination of glowing and dim phosphors form the image.

Recommended Resolution: The total number of pixels at which the monitor has its fastest refresh rate.

Refresh Rate: The speed at which a screen redraws itself, or the vertical scanning frequency at which the monitor redraws every line on the screen, measured in Hertz or Hz. Look for monitors with refresh rates of 75Hz or above. 85Hz is best for a flicker-free display.

Resolution: The number of pixels used to produce an image on the screen. This is specified by the number of pixels in each horizontal row and the number of pixels in each vertical column.

Shadow Mask: A perforated metal sheet in back of the screen that characterizes one kind of cathode ray tube technology. Often referred to as an invar shadow mask, it is punched through with holes to let the electrons pass through to activate the phosphor dots. The invar mask is 64% iron and 36% nickel.

Viewable Image Size: The standard monitor measurement is diagonal (just like TV), and thus the actual viewing area, or what you can see on the screen, is generally an inch or two smaller. That is because the plastic rim that holds the monitor together takes up a small part of the CRT.

that form the image on your screen. Dot pitch describes the size of a pixel. Three dots (one red, one green, and one blue) make up one pixel. The space between dots (or stripes, for the aperture grille type) of the same color is called the dot pitch. The smaller the space between like colors, the sharper the image.

At any rate, the best way to judge a monitor is by looking at it and using it for the type of work you do. So that's what we did.

On to the Tests!

To test these monitors, we used a battery of observational tests, evaluating each model for clarity, brightness, and color performance, with general graphics, text, and video. We polled several impartial observers as to their favorites in each category and calculated the favorites based the numeric averages of these tests. We also included more-objective methods in each test, involving matching colors, flesh tones, and other objects from a correctly calibrated reference monitor to our test subjects.

Of course, each monitor has a passel of onscreen controls that are used to tweak various parameters within the unit, independent of the actual video input from your Mac. These controls include adjustments for horizontal and vertical size and position, brightness, contrast, saturation, hue, and more. Many users won't need to worry much about these controls aside from the very basic settings; many of them are more applicable to graphics professionals who need to pay special attention to color accuracy. See the sidebar "But Are They Easy?" for more on this weighty topic.

Right out of the Box

It's not very scientific to just take a monitor right out of the box and hook it up for evaluative purposes without calibrating it first, but we suspect that many folks would take that very approach. So we did, too. And we weren't too surprised to find that, by and large, today's monitors are pretty much ready to go. We observed a swirling image produced by a psychedelia-inspired screensavers, characterized by fast and bold changes in color, con-

One click puts your business on the Web!

Introducing Corel Print Office™ 2000 for Macintosh®—the easy way to give your business widespread exposure. Create professional-looking business material that will set your company apart, then publish it to the Web* with the click of a button!

Easily create:

- Web sites
- Brochures
- Business cards
- Newsletters
- Raffle tickets
- Flyers

. . . and more!

Mac

*FREE!** Corel® Stock Photos*

Receive $50 US worth of Corel Stock Photos
when you register online* through Corel Print Office 2000 for Macintosh.

Also available for the PC.

*Internet access required.
**You must purchase Corel Print Office 2000 for Macintosh between Aug. 29 and Nov. 1, 1999, and register by Nov. 15, 1999. You cannot register through Corel's Web site.

Copyright © 1999 Corel Corporation. All rights reserved. Corel, Corel Print Office and the Go further logo are trademarks or registered trademarks of Corel Corporation or Corel Corporation Limited. Macintosh and the Mac logo are trademarks or registered trademarks of Apple Computer, Inc. All other product, font and company names and logos are trademarks or registered trademarks of their respective companies.

COREL®
Go further™
www.corel.com

Mitsubishi Diamond Plus 120U

trast, and brightness, on each screen in our monitor phalanx. (If you're interested, these images were created with Macthuga, at *www.afn.org/~cthugha*). The combination of rapid color changes and fast brightness transmogrification, we felt, was more than adequate to put these devices through a torture test.

In this admittedly unscientific test, we found the ViewSonic P815 to take top honors for its bold color reproduction and bright output. Second place was close, with Philips' Brilliance and Apple's Studio Display both notable for great color, but with Philips slightly edging out Apple for brightness.

The Winner

ViewSonic P185
2nd Place: Philips Brilliance 201B
3rd Place: Apple Studio Display

The Graphic Details

A more scientific approach would be to delve into these monitors' onscreen controls and set them to have similar output in terms of contrast, brightness, and colors. Each has a slightly different approach in its methods of invoking and using the internal controls — especially Apple's, which has software to make these adjustments.

Once the colors were adjusted and brightness balanced, we looked at a variety of graphics objects on the monitors. These included everything from test patterns (used to observe sharpness in lines and curves, and also to check moiré patterns, the unintended patterns that show up when lines are close together) to Guatemalan frogs.

Our panel voted the Apple tops for its very convincing depiction of colors from objects both mundane (a dull office building) and extraordinary (a bowl of brightly colored fruit). This was followed closely by the Mitsubishi 120u, and then by the ViewSonic, both of which turned in good overall performances but didn't match the Apple Studio Display's crisp edges and pleasing color.

The Winner

Apple Studio Display
2nd Place: Mitsubishi Diamond Plus 120u
3rd Place: ViewSonic P185

The Text Test

Okay, Okay ... whether or not a picture is worth a thousand words — and believe us, there's a lot of debate about that around here — most folks would agree that text is one of the most important ways we send and receive information, even in this graphics-intensive modern world. And text can be challenging on the eyes, since it's so darned small.

Obviously a bigger monitor makes for

Brand	Model	Price	USB	Mac Software	BNC	Tube Type	Dot Pitch
Apple www.apple.com	21" Studio Display	$1,499	Yes	Yes	No	Aperture Grille	.25mm-.27mm (Variable*)
Miro Displays www.mirodisplays.com	Radius XL-2	$999	No	No	Yes	Aperture Grille	.28mm
Samsung www.sosimple.com	SyncMaster 1000P	$1,019	No	Yes	Yes	Shadow Mask	.25mm
ViewSonic www.viewsonic.com	P815	$999	Yes	Yes	Yes	Shadow Mask	.25mm
Philips www.monitors.be.philips.com	Brilliance 201B	$849	Optional	Yes	Yes	Shadow Mask	.22mm
Nokia www.nokia.com	445xiPlus	$929	No	No	Yes	Shadow Mask	.22mm
Panasonic www.panasonic.com	PanaSync S110	$999	No	No	Yes	Shadow Mask	.25mm
Panasonic www.panasonic.com	PanaSync E110	$899	No	No	No	Shadow Mask	.25mm
Panasonic www.panasonic.com	PanaSync ProP110	$1,199	No	No	Yes	Shadow Mask	.25mm
Mitsubishi www.mitsubishi-display.com	Diamond Pro 2020U	$1,199	Yes	No	Yes	Aperture Grille	.25mm-.27mm (*variable)
Mitsubishi www.mitsubishi-display.com	Diamond Plus 120U	$1,119	Yes	No	Yes	Aperture Grille	.28mm

Variable: Some aperture grille monitors have a variable dot pitch as the space between the wires is closer together at the

bigger text, but as we mentioned, if you enlarge things too much (by switching your monitor's resolution), then you have less space for all the things you want on your screen. Text can also look blurry if you make it too big.

The trick is to get sharp-looking text that doesn't hurt your eyes, so you can spend all the time you want perusing online news sources for the latest news in, say, robots that threaten to take us over in the Year 2000.

Viewing text of varying sizes (from 9 to 72 points) on the screen, we looked for moiré patterns and "banding" around the edges where the letters and numbers curve. If you look very, very closely at these areas, you'll note that the curves (and the letters themselves, of course) are in fact composed of square-shaped pixels that tend to form bands, or lines, when curving. Banding refers to an optical phenomenon that makes curves look like successive bands.

Additionally, we tested the monitors for performance in displaying reverse text. If you're not familiar with that term, just select some text in any e-mail or word-processing program. Notice how the area around the text is black, and the text changes color? That's reverse text. Very common in advertising circles, you know. And it's an excellent test of a monitor's sharpness, as it lets you check for banding and moirés that would be missed in standard text observations.

We found that the ViewSonic came out tops in standard text, followed by Samsung and Nokia. In reverse text, ViewSonic won again, followed by a tie for second by Apple and Samsung, then the Radius XL-2.

Winner: Text

ViewSonic
2nd Place: Samsung SyncMaster 1000P
3rd Place: Nokia 445XiPlus

Winner: Reverse Text

ViewSonic
2nd Place (tie): Apple Studio Display, Samsung 1000P
3rd Place: Radius XL-2

Samsung SyncMaster 1000P

Video Time!

Today, many folks use their computer monitors to watch video. For the best quality on that *Sanford and Son* re-run, it behooves you to have a decent monitor upon which to view it.

When comparing these monitors for video playback, we looked for minimal "ghosting," referring to faint traces left by previous images, good color reproduction, and realistic flesh tones. When all was said and done, Mitsubishi's offerings took first and second place, followed by Radius.

The Winner

Mitsubishi Diamond Pro 2020u
2nd Place: Mitsubishi Diamond Plus 120u
3rd Place: Radius XL-2

The Conclusion

Because monitors are such an important component of your system, we urge you to take a very close look at whatever model you're considering. While it's likely you'll use the same monitor for everything, some monitors perform better than others do for certain tasks.

And since each monitor has its strengths and weaknesses according to its use, we have not declared an overall winner among them. You should determine the type of work you'll be doing most often when considering a purchase. The most important purpose for your monitor should determine your choice.

For graphics-heavy work, go with Apple. For you textual folks, the ViewSonic does it. And you videophiles should like Mitsubishi's Diamond Pro.

We've tried to give you a good baseline for comparing 21" monitors in this review, but you'll have to do a little legwork yourself. One final tip: Use your legs, not your back, when lifting these monitors. They are heavy!

Controls	Resolution	Refresh Rate	Viewable Image Size	Contact
●●●	1600 x 1200	85Hz	19.8"	800-767-2775
●●●	1600 x 1200	85Hz	19.7"	888-647-6462
●●●●	1152 x 870	75Hz	19.7"	800-933-4110
●●●●●	1600 x 1200	92Hz	20"	800-688-6688
●●	1800 x 1350	69Hz	19.9"	800-835-3506
●●●●●	1600 x 1200	88Hz	19.7"	800-483-7952
●●●●●	1600 x 1280	71Hz	20"	800-742-8086
●●●●●	1600 x 1280	69Hz	20"	800-742-8086
●●●●●	1800 x 1440	71Hz	20"	800-742-8086
●●●●●	1800 x 1440	80Hz	20"	800-843-2515
●●●●●	1800 x 1440	75Hz	19.7"	800-843-2515

center of the screen than at the edge of the screen for greater color uniformity.

By David Weiss

Look Ma, No Server!

Setting up a Virtual Store Using Just a Browser

When it comes to putting a store on the Web — that is, a Website from which customers can purchase your products online, it usually means setting up a Web server with a dedicated Internet connection that's (ideally) faster than your average dial-up line.

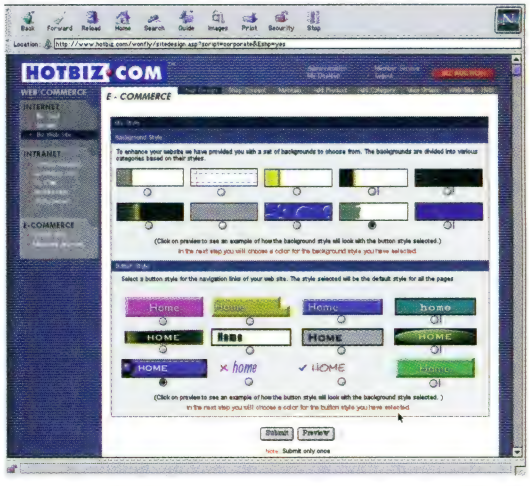
It also means learning software for Web-page creation, cataloging of products, and credit card verification and payment. But now there are a whole slew of Websites that, for a small fee, will get your store up and running in a matter of hours — and all you need is a Web browser and an Internet connection.

Hostess with the Mostest

Here's how it works: All of the software for creating the Website — organizing the virtual store and managing the orders — resides on a "host" computer. You don't have to download any software, plug-ins, or manuals; instead, you control the software remotely using your browser. Most of these hosting sites use JavaScript, a language that your browser uses to describe buttons, pull-down menus, slider bars, text-entry fields, and all of the other handy doodads and gadgets that allow you to work with software. To support JavaScript, you'll need a fairly current browser, such as Netscape Navigator and Microsoft Internet Explorer versions 4 and above. Actually, such hosting is getting to be quite a trend, and you can perform many an amazing task by subscribing to someone's remote software, such as time tracking (www.timebills.com) and writing business plans (www.smartonline.com). There are even sites that will allow you to edit video using JavaScript (www.javu.com). The beauty of this arrangement is that you can use the software from anywhere you happen to be.

Better Shop Around

You will hear a lot of hubbub about online stores in the coming year — just take a look at Sherlock II, the search utility in the Mac's next operating system, that will have specific channels for searching out online stores. And partly because of all this expected hubbub, there are actually quite a few sites out there that purport to allow you to set up a virtual storefront for free. And by the time you read this, there just might be a dozen or so new ones out there making the same claim. So check these sites out thoroughly — often there's a caveat in there to watch. One site, called Affinia (www.affinia.com), says in big, bold letters, "Now anyone can have a storefront — it's free!" But once you sign up, you realize its service is very particular and very specialized. You can't build a storefront for your own products; you can only build a portal for an existing merchant, and you get two things: a symbiotic relationship with the merchant — that is, you share each other's Web traffic — and a percentage of the sale. This is interesting, but it won't help you set up your own virtual store, if that's what you want to do. Another site, ECongo (www.econgo.com), sports a similarly promising greeting on its main page: "Get a free ecommerce site!" After I signed up for this one and went through the registration process, I found that it provides no facility for credit card transactions — only checks, phone orders, and C.O.D. However, I checked out this site before it was complete (what's referred to as a "public beta" in software-development parlance), and the site says it will be adding additional payment methods and various other functions, so be sure to stop by this site and see what it has to offer.



HotBiz makes easy work of creating a virtual store.

Step Right Up

Bigstep (www.bigstep.com) is another freebie site for building a virtual store, and just as eCongo is a public beta, Bigstep is a "preview edition." But since it seemed to be up and running, I registered and built a dummy virtual storefront. Since it's a preview edition, Bigstep developers will most likely be introducing enhancements and fixing bugs I encountered before press time, but that's true, really, of any Website.

Currently the page is a bit on the cluttered side, but it does show a comprehensive assortment of topics of interest to the virtual shopkeeper. Along with links that point you to building your site, Bigstep also features advice on building a customer base, tips on creating a good online catalog, a section specifically geared to setting up secure online transactions, and advice on promoting your store once it's on the Web.

Once into "Building your site," the process is fairly straightforward, as you use simple buttons to make selections for the look of your site, including fonts, colors, etc. But when I quit for the day and returned next day to the building of my site, I found it a bit tricky to get back into the flow of work. The site presents you with a list of pages you might want to include in your store, with pages to Edit on the top, and pages to Create underneath. I found it hard to figure out what to do first. I would have much preferred a linear process with a beginning, middle, and end, and preferably one that allowed me deviation along the way.

One of Bigstep's strengths is that it suggests boilerplate content that you might otherwise have forgotten to add — such as a privacy policy, an "about us" statement, a customer feedback form, and a news section.

Once you're done, you can preview your site and make any changes before you "publish" it, which you can do with the touch of a button. Unfortunately, Bigstep doesn't give you previews as you go about building your site, and because of this I felt that I was working in the dark for the most part.

And currently, there are a few navigation bugs. After doing some work building my page, for example, I clicked Continue and found myself at the main login page, being asked for my password.

So if it's free, how does Bigstep make its money? That's one of the first questions on its FAQ (frequently asked questions) page, and the answer is that soon Bigstep will charge for advanced services. So by the time you read this, it should be clear what those advanced services are. Because of the bugs in this preview version, I wouldn't feel immediately secure in setting up shop with Bigstep, but as with the other freebie sites, keep an eye on it, and when it is no longer "Preview" or "Beta," check it out thoroughly and register for a free trial before you entrust Bigstep with your customers' credit card numbers.

[You will soon hear a lot of hubbub about online stores — just take a look at Sherlock II, the search utility in the next OS, that will have specific channels for searching them out.]

HotBiz

HotBiz (www.hotbiz.com) also has some free services — free Web-based e-mail, a free Website that you can build online, and a free contact manager so you can get hold of all those phone numbers, even when you're on the road visiting relatives and your Palm Pilot, which also has all your phone numbers, is being used by your nephews to play Lode Runner. But to set up a virtual store, you have to pay — though in this case, it's not such a bad thing, because the software has a robust, trustworthy feel, and you also receive the benefits of VeriSign, a company that ensures the validity of credit card transactions.

HotBiz (www.hotbiz.com) provides many different services, and so in addition to the free service, which it calls Web Intro, it offers three subscription services: Web Works, which contains everything in the Web Intro with the addition of a virtual store; Web Office, which doesn't give you a virtual store but does give you, in addition to the offerings of Web Intro, an inter-office bulletin board and a chat facility, plus additional tools for managing e-mail and Sticky Notes you can share with all the people you work with; and Web Commerce, which provides all of the above tools. Web Office is $20 a month, Web Works is $27, and Web Commerce is $30 a month. Each of these licenses works for five people.

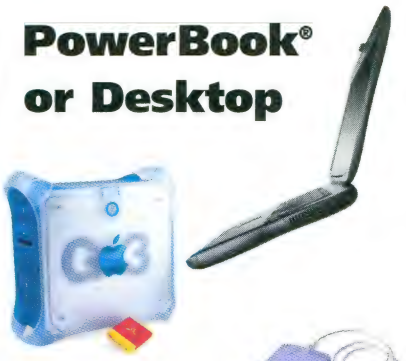
That gives you some background on the kinds of services available at HotBiz — you get all these additional whistles and bells. But the gist here is that for $27 dollars a month, you've got a fully secure online store. So what's it like setting up a site with HotBiz?

In a word, easy. Once you know what you want to say, show, and sell on your online store, creating an online store with HotBiz takes only an hour or two. It provides you with an assortment of layouts, buttons, and colors, and you can add your own pictures, not only of your products, but also as decoration to give the site its own identity. It also comes with a collection of clip art. The assortment of images and buttons is not vast, and because you are assembling prefabricated page elements, your page is not going to look "cutting edge" — rather, it will probably come out looking "safe," from a design point of view. But that can be okay, especially for an online store. People in online-shopping mode want to find products, consider the options, and buy a thing or two.

As you go along, you can see samples of the different fonts, backgrounds, and buttons you chose, and you can see a preview of a dummy page in your chosen style. The previews pop up quickly in JavaScript windows, so it has the look and feel of a "real" software program — you don't have to wait for preview screens to be downloaded, for example.

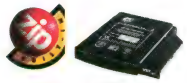
Thoughtful error messages are built into

PowerBook® or Desktop

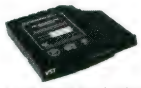


VST has the portable solutions you are looking for.

The full VST product line for the New 1999 Version Macintosh® PowerBook G3 Series



Zip®100 Drive



6, 8 & 10GB Hard Drives

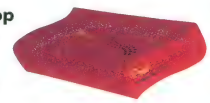
FireWire CardBus Card

DVD-ROM Kit

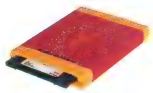
SuperDisk™ Drive

Also available: Chargers, Auto Adapters, AC Adapters and Li-Ion Batteries.

New for the desktop — FireWire Zip and Hard Drives! Our thin Zip drive reads 100MB disks and our full height drive reads both 100MB and 250MB disks!



10, 14 and 22GB FireWire Hard Drives



FireWire Zip Drive

VST products may be purchased through our web site at:

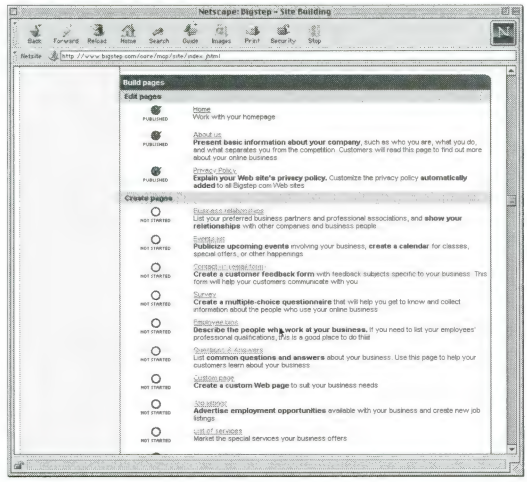
www.vsttech.com

Apple, Macintosh, iMac, and PowerBook are registered trademarks of Apple Computer, Inc. Zip is a registered trademark of Iomega Corp. SuperDisk is a trademark of Imation, Corp.

VST TECHNOLOGIES Incorporated
125 Nagog Park
Acton, MA 01720
(978) 263-9700

the site. At first I didn't have JavaScript enabled in my browser, and rather than getting an obscure Netscape error, I got a nice thoughtful page from HotBiz explaining what I needed to do. And the site has good internal security. In certain places, if you try to jump to another page, you're asked first to "log out."

Finally, ordering products is very easy,



Bigstep will help you build a virtual store for free.

and very professional. The ecommerce interface uses a "shopping cart" metaphor that you should be familiar with if you've been to any ecommerce sites, and there's a decent amount of hand holding to make your customer feel secure.

John Hurleyman used HotBiz to turn Etna Brewery, a nine-year-old establishment, into a "virtual brewery" as well. So not only does the Web presence help the actual brewery, but it's also another source for making sales. He found HotBiz extremely easy to use, saying that he got the site up in about an hour. "You don't have to be technical at all," says Hurleyman, "to build a nice, clean page." Shawn Bates, owner of PoolPro, a small company that recently set up shop with HotBiz, agrees. "Using HotBiz is much easier than [Microsoft] FrontPage. With FrontPage, even though I'm computer literate, I spent too much time learning and not enough time running the business."

Hurleyman also values the other tools that HotBiz provides. Because of features like the chat facility, messaging, and the online contact manager, Hurleyman was easily able to set up the equivalent of an Intranet, a shared online working environment set up just for him and his coworkers. "It makes it really easy for me and a few others to collaborate on the same Website," says Hurleyman, "even if we're working from different locations."

Some nonprofits are also using the site, not so much to make sales, but to disseminate information. Stan Dundon, coordinator of Soul of Agriculture, which promotes the value of family farms, says that instead of listing products, he lists brochures, and the only costs listed are for shipping.

The only major downside to HotBiz, and this is probably true of most other Web-based ecommerce tools as well, is that you have to add each product individually, fill out various fields to describe the product, give it a cost, click Submit, and then wait a few seconds. So those with a large inventory will probably still want to invest the time and money to set up their own server, with which they can automate the process using FileMaker. A minor downside is that the address for your virtual store will come out as a long appendage to "hotbiz.com."

Get the Word Out

It's important to keep in mind that unless you promote your site, no one will know it's there. Of course, some people will happen upon it, but you've got to put a concerted effort not only into building the site, but building a bridge that leads into that site. To get started, first see what you can do for free. Crawl the Web, searching for products like yours, and ask to get on all the lists you find along the way.

Ka-Ching!

Setting up a virtual store is a great way to expand your business. And if you want to get your feet wet, you ought to see what's available on the Web. Sites such as HotBiz seem like excellent places to get started — if you don't have too terribly many individual items in your inventory, you might want to just plunge right in. MM

Say it with Pictures!™

Easy Photo Editing and Fun Projects

Corel® Custom Photo for Macintosh® lets you touch up your images and add spectacular effects in a snap. Then turn your edited pictures into meaningful projects—and print or share them over the Internet* in just a few simple steps. Make the most of *your* memories with Corel Custom Photo for Macintosh.

Ideal for iMac™ and iBook™ users

***Includes*:**

- Incredible Web features
- 30+ special photo effects
- 10,000+ stunning graphics
- 1,000 ready-made sample projects

Visit **www.corel.com/customphoto** for more information. To order, call **1-800-772-6735**.

Mac

This advertisement was designed and created using award-winning Corel graphics software.

*Internet connection required.

Copyright © 1999 Corel Corporation. All rights reserved. Corel, the "Say it with Pictures!" byline, the Corel balloon logo, the Go further logo and "Spectacular photos in a snap!" are trademarks or registered trademarks of Corel Corporation or Corel Corporation Limited. Macintosh, iMac, iBook and the Mac logo are trademarks or registered trademarks of Apple Computer, Inc. All other product, font and company names and logos are trademarks or registered trademarks of their respective companies.

COREL®
Go further™

By David Weiss

Speak Out!

External Speakers Add Punch to Your Mac

Every Mac is a CD player; just pop in any music CD, wait a few seconds, and you'll start to hear it. Then call up the Apple Audio CD control panel and crank it. Well, sort of — most speakers that come with the Mac aren't so hot.

They're usually okay for playing a Boing or a Wild Eep, but when it comes to music, you can do better. So let's hear it for external speakers.

There's nothing fancy or special about computer speakers. They don't care about your operating system or your processor. They don't care if you're a Mac or a PC. They plug directly into the Audio Out jack on the back of your Mac — the one with the speaker icon on it. When shopping for speakers, your main concerns are going to be your wallet and your ears. If you can't test the sound out for yourself, there are a few features to keep an eye out for. First off, check for the presence of a subwoofer, which often comes as part of a three-piece set. The subwoofer, which produces low, thunderous bass tones, usually sits on the floor, while the two others sit on your desk on either side of your monitor. Also, see what you get in terms of controls. Most offer an on/off switch and a volume control, but some offer a separate control for bass.

We tried out the ACS65i speakers from Altec Lansing, the Apolla speakers from Pele Enterprises, the Mac Audio CA-2000 speakers from Cyber Acoustics, and the SoundMan X2 from Logitech.

Apolla Landing

Let's start with the Apolla speakers from Pele Enterprises. At $40, they're by far the least expensive of the lot, and that's mostly due to the lack of a subwoofer. They stand about six inches high, tilting back slightly to aim them up towards you ears when they're sitting on your desk. They come in the five translucent iMac fruit colors plus bondi blue, the color of the original iMac.

The right speaker houses an on/off switch, power indicator light, volume, and bass controls.

Don't be fooled by the Apolla's modest price tag and lack of subwoofer — for the money, these speakers put out surprisingly good, rich sound. With the bass cranked all the way up, it's a tad muddy, and you can't actually *feel* the bass, so you might find them inadequate for hip-hop parties, but they have a good overall sound.

AC/DC

Speaking of hip-hop parties, now we move into the sphere of the subwoofer. Altec Lansing's ACS65i model sports a subwoofer with bass that you can not only feel, but which can generate enough force to roll pencils off of your desk.

The subwoofer is a large box, made stylish due to a translucent blue plastic base. You need to store it on the floor, and the obvious place is under your desk. Its two midrange speakers are similarly decked out in molded blue plastic, and flange out at the bottom to form a base, which props the speakers up off of your desk. They have a sharp look, but unfortunately, they only come in blue, so if you're picky about matching the color of your iMac, you might want to keep that in mind.

The right speaker has a cool, translucent volume control built into its base, and it also serves to turn the speakers on.

A power indicator light also sits on the right speaker. A separate control for bass the lies on the subwoofer, which is kind of an awkward place to put a control. Every time I wanted to adjust the bass, I had to crawl underneath my desk.

But let me return to how they sound. I've already mentioned the bass, which is awesome, and in all other respects these speakers shine. The sound is full, clear, pristine, and rich, all the way up to those crispy little high-hat fills. And in terms of power, these speakers will not dissapoint you — they can fill a whole room if need be. Though they are on the expensive end, at $100, you'll clearly be able to appreciate the difference, and a music aficionado will consider them to be well worth the money.

Audio, Thy Name is Mac

Next we come to the Mac Audio CA-2000 speakers from Cyber Acoustics. Like the ACS65i, it's a three-speaker system — two midrange speakers that sit on your desk and a subwoofer that you can stow underneath.

The subwoofer box is about half as wide as that of the ACS65i, so it's easier to store. But more importantly, the CA-2000's subwoofer is a smaller speaker than the ACS65i's subwoofer, and that's probably why it's $20 cheaper.

The two midrange speakers are shaped just like iMacs. They come with a whole set of colored backs, and you just slip them on like coats to change their color.

There's a volume control on the left speaker, and other than the power button that resides on the subwoofer, there are no other controls. Again, the subwoofer is a funny place to store controls, and this one is on the top. So to turn these speakers on or off, I had to crawl under my desk.

The CA-2000 speakers don't sound quite as good as the ASC65i speakers, and the bass is not quite as strong. But these speakers are still very impressive, and for the cost, they end up being quite a good value.

Turn up the Sound, Man

Logitech's SoundMan X2 is also a three-piece system with two midrange speakers and a subwoofer, but unlike

the ASC65i or the CA-2000 speakers, whose subwoofers point down towards the floor, the SoundMan's subwoofer has a cylindrical design with a sound port that points the bass up towards you. The net effect of this design is that you can store the subwoofer anywhere you want — on the floor, on your desk, or on a shelf — but typically, you'll want the bass below you. It comes with a CD of MP3s, which is a nice touch.

The SoundMan set is in black, in marked contrast to its colorful, translucent compatriots being reviewed here. The midrange speakers have a tall, thin, curvy design that makes them easy to store near a monitor.

The right speaker has a volume control, and there is a bass control, but it resides on the back panel of the subwoofer, unfortunately. It has an auto-turnoff feature — after 15 minutes, if it doesn't get any sound, it will turn off.

The SoundMan X2 speakers sounded very good, but they didn't come close to matching the quality of the ASC65i, especially in the bass department. Midrange tones came out a tad muddy and thin. They sounded better and stronger than the CA-2000 speakers, but not by a very huge margin.

The Final Decision If you don't want to spend too much, or if you just have no interest in a subwoofer, the Apolla speakers are a very good value, but for a bit more, the CA-2000s have a fuller sound and a smaller profile as well. For the more expensive speakers, the ACS65i's are the clear victor. The SoundMan speakers, although they sound pretty good, are not that much better than the less-expensive CA-2000's, which make the CA-2000s the overall winner with regard to bang for the buck. MH

rating ●●●●

ACS65i
$100, Altec Lansing
800-258-3288
www.altecmm.com

Excellent sound, separate control for bass, on/off plus volume on speaker

Expensive, bass control is on subwoofer

rating ●●●●

Apolla
$40, Pele Enterprises
804-340-0820
www.pelezone.com

Inexpensive, great sound for the price, separate control for bass, iMac colors

No subwoofer, sound not quite as good as more-expensive speakers

rating ●●●½

Mac Audio CA-2000 Speakers
$80, Cyber Acoustics
360-883-0333
www.cyber-acoustics.com

Great sound, comes with a set of iMac-colored shells, has subwoofer

On/off button is on subwoofer, no bass control

rating ●●●½

SoundMan X2
$100, Logitech
800-231-7717
www.logitech.com

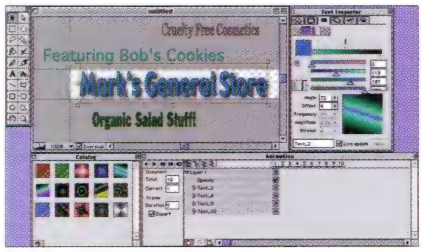
Great sound; has subwoofer with separate bass control; comes with a CD of MP3s; slim, sleek speakers

Expensive, sound could be better, bass control is on back of subwoofer

e-Picture

Web designers always keep their eyes peeled for easier, cheaper, and more versatile software for creating interactive elements, and BeatWare's e-Picture promises to be just that.

It's designed to help you build Website banners, animated GIFs, and JavaScript rollover buttons. It works with vector, bitmap, and even 3D graphics. It also includes some handy banner and button templates to get you started.



Unfortunately, in its first incarnation, e-Picture is disappointing. Because it doesn't adhere strictly to the standard Macintosh user interface, many of its simple operations are counterintuitive, and consequently there is a higher-than-desirable learning curve, to the point where e-Picture would be virtually incomprehensible without the manual.

For instance, you can't just select a piece of text with the mouse; a type selection requires three mouse clicks — one on the Arrow tool and a double-click to select the type. After that, you can double-click the color picker to change the stroke or the fill colors, or add gradients or other effects. Changing type color was tricky, as there are two modes: the stroke and the fill. While the tabs to select each are available, interactive tool tips to remind us of what the icons mean are needed to make this program truly usable. An unlabeled sub-icon menu within the Type Inspector palette, while providing flexibility, also proved confusing.

However, we did find the animation feature more intuitive and easier to manage, and once we got the hang of the interface, it was fairly easy to edit and update compositions.

BeatWare has marketed e-Picture for OS 8.0 and above; however testing in 8.1 proved a challenge, producing menu glitches and crashes. Thus, we don't recommend that you use this program with any OS predating 8.5.

The Final Decision As a first-time Mac program (it was developed on the Be OS and then ported to the Mac), the concept behind e-Picture is very cool. BeatWare says that e-Picture's interface will be improved in the second version to make it more Mac like. We look forward to those improvements.

— Jackie Dove

rating 🍎🍎

$199, BeatWare
650-556-7900
www.beatware.com

👍 **Fully editable graphics, support for 3D graphics, inexpensive**

👎 **Counterintuitive interface, inconsistent performance**

FireWire 2 Go

The most-recent G3 PowerBooks lack FireWire, the high-speed serial protocol that is touted as superior to SCSI. So if you want to use FireWire peripherals with your PowerBook, you might look into Newer's FireWire 2 Go card. It slips into your 'Book's PC Card slot (also known as a Cardbus slot) and, with the help of a handy little converter cable, lets you do just that. And if you accept the old adage that nothing's perfect, you should be relatively pleased with the results.

We say this because although FireWire devices are supposed to be able to draw their required power from the FireWire bus, in this case an external power supply is needed. That's not Newer's fault, by the way — the design of the PC Card slot in these PowerBooks is such that it can handle the data flow of FireWire, but it doesn't supply the power as is the case with a standard FireWire port.

So, hooking up a VST FireWire hard drive, along with (sigh) its AC adapter, I was able to get some impressive performance out of the FireWire 2 Go card. Numbers? You want numbers? Copying a pretty big file (8.5MB) from an external VST FireWire drive to the 'Book took just over 3.5 seconds, while sending it the other way took about 5 seconds. This is about 10% faster than we'd observed using the same drive with a blue-and-white G3.

Just as we would expect, copying the same file to a SCSI Zip drive took longer — about 14 seconds in either direction. Using an Imation SuperDisk was the pokiest method, yielding a copy time of about 18 seconds from the PowerBook to the drive, and around 28 seconds the other way.

Aside from storage, you can use FireWire 2 Go to connect your PowerBook with other devices, such as DV (digital video) camcorders. Using Apple's Final Cut Pro and a Canon Elura camera, I was able to capture video and control the deck right from the 'Book.

The Final Decision FireWire 2 Go is a fast way to transfer files and connect to peripherals for G3 PowerBook owners. Until such time as Apple adds FireWire to its notebooks, we feel this card is a decent solution, if a little costly. It's too bad that external power is needed for connected devices, though we can't pin that on Newer.

— John Poultney

rating 🍎🍎🍎🍎

$249, Newer Technology
316-943-0222
www.newertech.com

👍 **Fast, fast, fast; can connect with Digital Video equipment**

👎 **Pricey, FireWire devices need external power**

A New Level of Excellence in Digital Photography.

External Flash Sync
support for total lighting control.

LCD Cover
protects against the elements with the camera On or Off.

6 creative ways to capture images!

Full Color

Super Macro

Black & White

Sepia Tone

Text Mode

Burst Mode captures images in rapid succession

2.3 Million Pixels

3x Optical Zoom

Super Macro

USB/iMac Ready

Auto Bracket Mode

Powerful features for professional results

with point and shoot simplicity!

- *Selectable resolutions modes: 1800x1200, 800x600*
- *38-114mm optical zoom, Plus 2.5X digital zoom*
- *Continuous auto focus from 1.6 inch macro to infinity*
- *Fast USB file transfer*
- *Dual memory sources: 8MB on-board with up to 64MB SmartMedia (optional)*
- *5 flash settings: automatic, strobe sync, red-eye reduction, forced and off*
- *6 white balance settings: auto, daylight tungsten, florescent, incandescent and overcast.*
- *Adjustable exposure compensation*
- *NTSC and PAL video out for television and VCR playback*
- *Standard JPEG file format with user selectable compressions*
- *Optional remote control support*
- *Time/date stamp*

RICOH

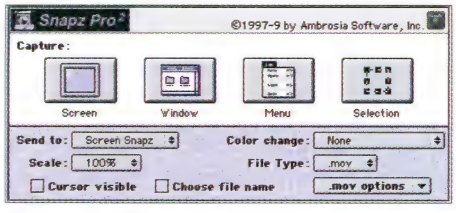
www.ricohcpg.com

1-888-RICOH-10

742-6410

Snapz Pro 2

As they say, a picture's worth a thousand words. [Ed. note: There's some debate on this around here] And no matter whether you're writing documentation for users of your office software system or you just want to gloat over your latest *Mars Landing* scores, if it's difficult to get pictures of what's on your screen, those words might not be what you should be using around the children. Fortunately there's Snapz Pro 2. This newer, better version of Ambrosia's screen-capture utility is guaranteed to make screen shots a snap.



While the Snapz Pro interface remains essentially unchanged, you shouldn't be fooled; the program has been completely rewritten and gives Snapz some considerable muscle. Among the program's many new features is support for multiple image formats, including GIF, JPEG, TIFF, and PNG. There's also a new selection tool that can be resized before you take your shot, as well as nearly a dozen Command-key options that make Snapz an incredibly versatile utility.

As if that isn't enough, Snapz has added one absolutely amazing new feature: QuickTime movie integration. Now it's no longer necessary to take a half-dozen screen shots to get your point across. Instead, you can use Snapz Pro 2 to record movies of all your onscreen actions. Granted, this is useless if you're only working in print. But if you want to integrate movies into your training documents, add instructional video to your Website, or make your demonstration presentation a little more palatable, you'll find this feature invaluable.

Snapz Pro's downsides, while nearly insignificant, have, unfortunately, been part of the program for several iterations now. First, you're limited to storing your shots on the Desktop or in the Screen Snapz folder, which resides in the System folder. This is far less convenient than storing your shots anywhere you please. Second, the dialog box used for naming your Snapz doesn't work as expected, requiring you to delete the majority of an image's name to correct a single misspelling in the middle.

The Final Decision There is no doubt that Snapz Pro 2 is the preeminent screen-capture utility for the Macintosh. It far outclasses and outperforms any other product on the market.

— Jeff Battersby

rating ★★★★½

$40, Ambrosia Software
800-391-2146
www.ambrosiasw.com

👍 **Amazingly versatile screen-capture utility, multiple-image formats, QuickTime Movie integration**

👎 **Some minor interface quirks**

SoundJam MP

With Internet distribution of MP3s picking up steam, MP3 software is following suit. One recent entry to the field, SoundJam MP from Casady & Greene, promises to help you jump right into the MP3 scene.

SoundJam has a conversion utility for generating MP3 files, and a playback utility for listening to them. A list of available audio tracks automatically pops up when an audio CD is placed in the CD-ROM drive. You can also add QuickTime, AIFF, and WAV sound files to the conversion list by dragging the file icons into the window. A second configuration window allows you to change various MP3 options to suite your needs. But unfortunately, SoundJam MP doesn't support third-party CD-ROM software, is used by many external drives.

The playback function is pretty easy to use. Just drop an MP3 file into the playlist window and hit the play button. The playback unit can take on a number of radically different appearances, or "skins" — some of which come with the program, and some of which you can import from the Web, to endow your player with the look of an alien space monster, an electric guitar, or simple burnished platinum.

A more practical feature is the ten-band graphic equalizer, with different presets suited for various types of music, from classical to hip-hop. The manual and automatic pre-amp functions allow you to adjust playback volume to compensate for differences in various recording volumes.

SoundJam also offers a menu devoted to related Internet sites, with shortcuts to SoundJam's own site and to Websites offering collections of MP3 files for your listening pleasure. It's useful for Websites offering streaming MP3 files, but 56-kbps modems are not usually adequate for streaming MP3 playback. There's also a collection of over 100 songs included on the SoundJam MP CD-ROM — a good thing for folks like me who want to experiment with SoundJam MP without waiting to download MP3 files.

The Final Decision If you're looking for a rock-solid and fun program capable of creating and playing back MP3s, check out SoundJam MP. If you have an external CD-ROM drive, however, you might want to look for something else.

— Frank Araullo

rating ★★★★

$40 (online), $50 (box); Casady & Greene
831-484-9228
www.soundjam.com
PowerPC Required

👍 **Customizable appearance for playback unit, graphic equalizer function, supports streaming MP3**

👎 **No support for third-party CD-ROM drives**

We move the information that moves your world.® adaptec

©1999 Adaptec, Inc. All rights reserved. Adaptec, the Adaptec logo, the Adaptec tagline, Toast, CD Spin Doctor, and PhotoRelay are trademarks of Adaptec, Inc., which may be registered in some jurisdictions. All other trademarks used are owned by their respective owners. This software is designed to assist you in reproducing material in which you own the copyright or have permission to copy from the copyright owner. Manufacturer's suggested retail prices. Price, dollars, subject to change without notice.

TEACH YOUR CD-RECORDER SOME NEW TRICKS.

Available at:
CompUSA · Fry's Electronics
Micro Center · J&R Computer World

New Toast™ 4 Deluxe opens a world of possibilities far beyond the software that came with your CD-Recorder. Now you can pull MP3 files from the Internet, as well as favorites from LPs and cassettes, to create your own compilation CDs. New CD Spin Doctor™ software removes hisses, pops and clicks from old recordings—your music is reborn in stunning digital quality.

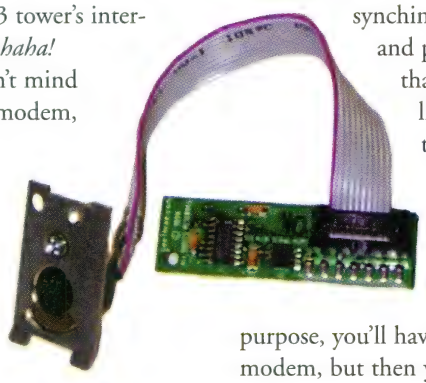
New Toast 4 Deluxe, Only $99* m.s.r.p.
With $20 Upgrade REBATE OFFER $79

And new PhotoRelay™ software lets you view, sort and organize your photos, illustrations, scanned images, movies, sounds, and fonts in customized media catalogs. Upgrade to Toast 4 Deluxe. It will be your CD-Recorder's best friend.

For details on the Toast 4 Deluxe Rebate Offer, see your retail store or contact us at: http://cdr.adaptec.com/mhtoastd or 1-800-442-7274 x5954.

Stealth Serial Port

It sounds so sneaky — but that's because Gee Three's Stealth Serial Port is so damnably clever. It's a serial port that hides in your G3 tower's internal modem slot. *Nyahaha!*



As long as you don't mind losing your internal modem, this sneaky little port is a great way to use your serial digital cameras, Palm organizers, printers, or even MIDI devices with your G3. In contrast, many serial-to-USB converters won't work with MIDI, and many have restrictions on which printers and cameras they'll support. The Stealth port, because it's hard wired to the motherboard, behaves exactly like a serial port — you select it in the Chooser to print, it comes up in the AppleTalk control panel, and it's recognized by every piece of software we tried it with that uses a serial port, including Opcode's MIDI software, a slew of digital cameras, printers, and so on. Taking the port through its paces — downloading images from a camera, synching my Palm Organizer, and printing — I found that it performed just like a serial port in terms of speed and reliability.

Of course, if you're using the internal modem slot for its consecrated purpose, you'll have to take out the modem, but then you can get an external USB modem, many of which work quite well, and they're easy to plug in and out, if you need to.

The stealth port couldn't be easier to install, thanks to the handy "door" feature of the G3 tower — just load the system extension, shut down, lower the door, attach the Stealth Port's cord and faceplate, start up again, and boom — you've got a serial port.

Gee Three is currently working on other serial products: a version of the Stealth Port for iMacs, as well as a 3-port switch that will enable you to plug in three serial devices simultaneously.

Also, by the time you read this, Gee Three hopes to provide software support for the G4, which leads me to wonder whether the name of the company will change as well.

The Final Decision If you need access to serial devices, especially if you've made a substantial investment in MIDI equipment, then you need a serial port, and the Stealth is the way to go. It's cheap, easy to install, and works like a charm.

— David Weiss

rating ●●●●½

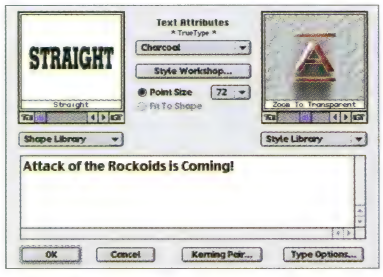
$50, Gee Three
650-328-8091
www.geethree.com
G3 Tower Required

👍 **Inexpensive, easy to install, works flawlessly**

👎 **Can't keep your internal modem**

TypeStyler 3

Years ago, when I wanted to make a quick logo or headline, I just pulled up TypeStyler and in minutes I had what I needed. Unfortunately, TypeStyler, in its original home at Broderbund, languished, and updates were few and far between. Well, the original author, Ken Stillman, finally took back distribution rights and his company, Strider Software, Inc., has come out with version 3.0.



It would take a review twice this size to cover the features of this terrific product. Suffice it to say that you can take one or more lines of type and shape and shift them in any way you might imagine — up, down, sideways. You can also embellish the edges of letters with custom shapes such as bursts. But the most amazing thing about this program is that no matter how much you stretch your letters, you can still edit them.

There's also a set of basic drawing tools that you can use to further enhance your artwork. These tools won't replace those you might find in a dedicated drawing program, but you'll find them handy nonetheless. Customize each effect as you prefer, using the program's easy-to-learn interface, and stretch your creativity to the limits. TypeStyler comes with an assortment of prefab designs, including a Wacky Shape Editor that lets you bounce letters above and below the baseline.

After your work is done, you can print the page directly or export it to your favorite desktop publishing, drawing, or image-editing program to include with the rest of your project. For the Web, you'll be pleased to know that you can create animated GIFs and complex JavaScript rollover effects, which can make simple lines of type behave like movie credits.

There's little to dislike about TypeStyler. My quibble is the same one I've had for years: I'm not too crazy about the fact that you can't just click on a document and edit it. Instead, type effects and backgrounds are done in special editing windows.

The Final Decision It's great to see an old friend back. Once you start getting into this elaborate program, you'll find it hard to live without. But if you don't want to take my word for it, just take a look at the CD you got with this issue — There you'll find a free trial version of this astounding program.

— Gene Steinberg

rating ●●●●½

$150, Strider Software
906-863-7798
www.typestyler.com

👍 **Easy to learn; incredible feature-set; large, thorough manual**

👎 **Cannot enter text directly on page**

i like it on top.

Get on top with the Kritter™ USB, the all new, totally hip, digital video camera that's insanely cool. Period.

Hangin' out

On top

Hovering (optional)

Over the top (optional)

Hiding

See for yourself at www.irez.com/fun

or call 480-922-0044 ext.111

iREZ
Looking beyond the beyond...

Photoframe 2.0

Photoframe 2.0 is a unique Photoshop filter from Extensis that adds dramatic edge effects to your photography and artwork. The software includes over 1,000 frames that can be customized and combined with other frames for unlimited possibilities.

Extensis has made it very easy to get up and running with Photoframe. After you install the software, you simply need to launch Photoshop, open one of your favorite images, select Photoframe from the Extensis menu, and add a frame file. The frame is then applied to the photo, leaving you with a unique image that you can print out, mount on the wall, or use as a desktop background. You can add as many frames as you like, layering them on top of each other for a variety of different effects. Extensis gives you even greater creative flexibility by allowing you to apply bevels, glows, shadows, and textures to each frame layer independently. You don't need to worry about making a mistake, either. The effects are applied to each frame layer in real time. Simply adjust the variables, and if you don't like what you see, you can continue to fine tune the effect.

One complaint with Photoframe 2.0 is that you have to load both frames and textures each time you create a new frame setting. Unfortunately, there's no convenient palette allowing you to browse through the many frames included with the package. Instead, you've got to use the standard Open/Save dialog box or the included Portfolio 4.0 image-viewer application to peruse the frame files. Equally frustrating is the fact the installer only copies a few frames to your hard drive — if you want access to the entire library of frames, you need to have the CD in the drive. Granted, you can copy any and all frame files to your hard disk yourself, but it certainly would be more user friendly if the installer copied a greater selection of frames to the hard drive for quick access.

The Final Decision

Photoframe 2.0 is a fun filter with a gamut of options that will certainly find a good home on the desks of many graphics professionals. Unfortunately, at $199, the software is unreasonably priced for most consumers. It's a shame, too, since Photoframe 2.0 offers a quick and creative way to jazz up your digital photographs and artwork.

— Chris McVeigh

rating

$199 ($79 upgrade), Extensis Corporation
503-274-2020
www.extensis.com
PowerPC Required

Very easy to use, real-time preview, fantastic results

Expensive, no integrated frame browser

SnapScan Touch

We all have photos, letters, and other printed materials that we'd love to bring into our Macs to edit, tweak, or e-mail to friends. And, of course, we'd all love this to be easy, and that's the simple idea behind Agfa's SnapScan Touch.

The Touch is a small desktop scanner that can accommodate up to letter-sized paper, and it comes with different-colored handles with which to match the color of your iMac. It can scan at a maximum hardware resolution of 600 x 1200, which is not astronomical, but I found it was perfectly adequate for capturing intricate details, such as 4-point type.

But the standout feature of this scanner — and the reason that it's called the Touch — is a panel of four, large rubberized buttons. The largest one calls up the scanning software, but many scanners in the Touch's price range sport such buttons.

It's the other three that are downright revolutionary: the first sends your scan directly to your printer (cool), and the second scans your document for text and pours it directly into a word-processing document (*ultra* cool). The third — get this — scans your document, crops it, figures out the correct resolution and image size, puts it into the correct file type, and attaches it to a open e-mail, all ready for you to just type in an address and click Send (*whoa!*). You just have to remember, in OS 8.5 and higher, to set your default e-mail application in the Internet control panel, otherwise, you'll get a bizarre, incomprehensible error message.

The scanning software itself is much improved over the software of previous wallet-friendly Agfa scanners. It has a clear, visual interface that shows you only the tools you need for your specific job, and it's smart enough to sense when you have multiple pictures on the scanning bed. Unfortunately, it doesn't provide any of the more-advanced features, such as adjusting curves or setting the white point, so I had trouble reducing grey fuzz in the white areas of my scans.

The Final Decision If you want it easy and you don't need extensive control over your images, pick up the Touch.

— David Weiss

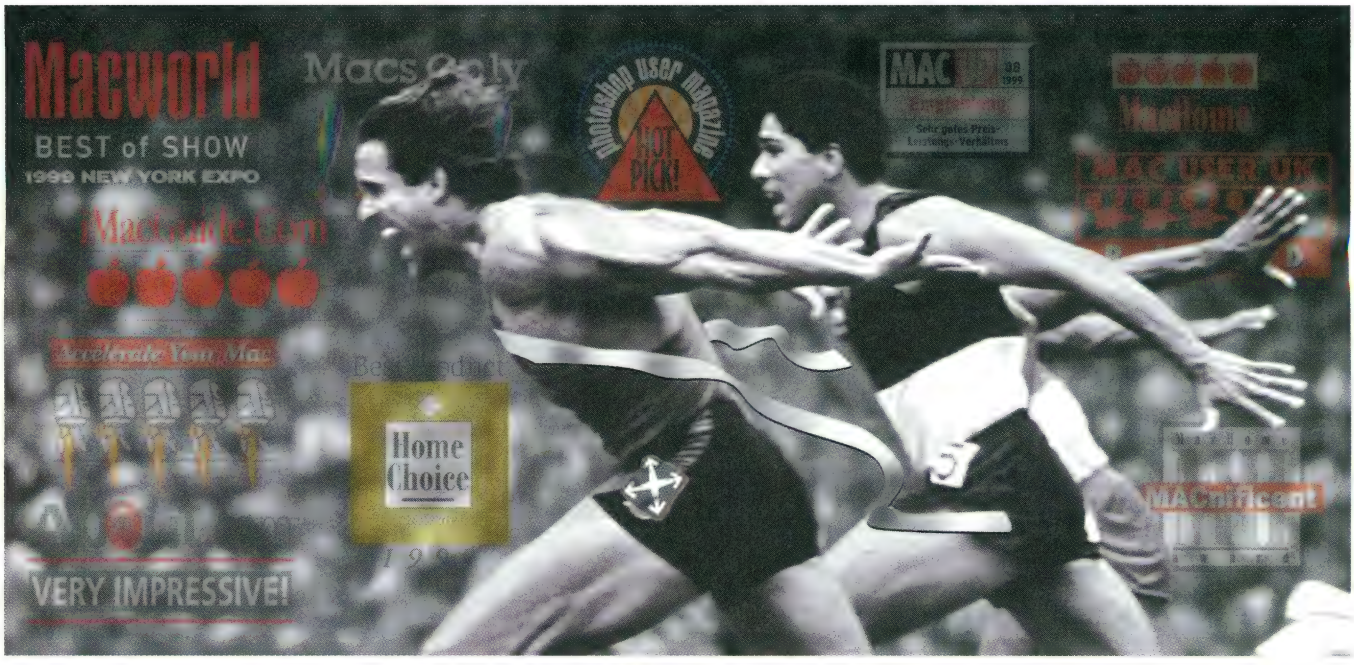
rating

$129, Agfa
888-281-2302
www.agfa.com
USB Required

Inexpensive, amazing one-button controls, friendly software

Software lacks some advanced features

Get the Winning Edge.

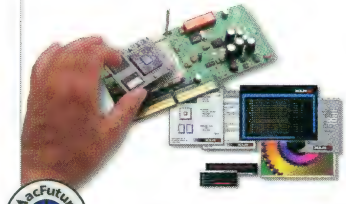


From QuickTime® video to PowerPC® G4, XLR8® products lead the pack in every category.

Right out of the gate, it may look like the field is full of speed and expansion options. Looks can be deceiving. When it's down to a photo finish, XLR8 products win the race.

We push the edge when it comes to innovation so you get the "best of the best" for your Mac®. That's why industry experts are awarding top honors to our patent-pending Carrier G3/G4 Upgrade Technology™ and InterView™– the first USB product to turn the iMac into a true media machine. These products earn blue ribbon status by delivering the winner's edge, right out of the box.

XLR8, tools to perform and create… on your Mac.



MACh Carrier's *G3/G4 patent-pending upgradeable upgrade technology was selected as Macworld's "Best of Show" and as Photoshop User's "Hot Pick."*

MacFuture Buy It!

"Buy it!"– *MacFuture*

InterView™ *w/VideoShop 4.5 for USB and PCI has been listed as the perfect choice to deliver QuickTime video, and the "1999 Best Product of the Year" by Mac Home Journal.*

XLR8

888XLR8TOR • www.xlr8.com

Interex, Inc. • 8447 E. 35th St. N. • Wichita, KS 67226 • 316-636-5544 • 316-636-4639 fax

Other brand and product names are trademarks or registered trademarks of their respective holders. Product specifications subject to change without notice. ©1999 Interex, Inc.

ALLSOP StaggerStack.

Unit holds 16 CDs with extra storage on top. Staggered design provides easy CD identification and removal. 60299

EPSON Stylus 740i Color Printer.

1440 x 720 DPI of photo quality color. Compatible with Windows '98, '95 3.1x, NT, Macintosh, USB. 4-color Micro Piezo Inkjet. Adobe PhotoDeluxe, Broderbund, etc. 6PPM black, 5PPM color. 1-year overnight exchange warranty, 86439

IMATION USB SuperDisk Drive.

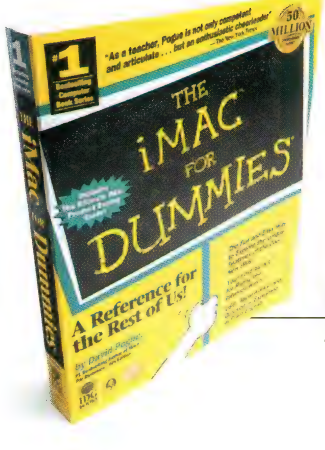
120MB capacity. USB interface. Uses 1.44 3½" floppies and 120MB SuperDisk. iMac compatible. 49319

NEWER USB uDrive.

1.4MB floppy drive. USB interface, iMac compatible. Styled to match iMac. Stackable with other Newer uLine peripherals. 49709

AGFA SnapScan USB Color Scanner.

600 x 1200 PPI optical, 36 bit. 9600 x 9600 DPI interpolated. 8½" x 11⅞" scanning. USB interface, iMac and Windows '98 compatible. Agfa Scanwise, Corel Print House Magic. Caere's Omnipage LE 5.0 for OCR. 46149



iMac for Dummies.

A reference for the rest of us. 63018

Your girlfriend's not the only one who can accessorize at Sears.

ALLSOP CD Transit.
Stores a combination of 10 CDs, DVDs or CD-ROMs. 60114

NEWER USB uHub.
7 ports. Cross-platform capability. Styled to match iMac. Stackable with other Newer uLine peripherals. 8 indicator lights, AC adapter. 49719

IOMEGA USB Zip Drive.
100MB capacity. USB interface. Windows and iMac compatible. 49229

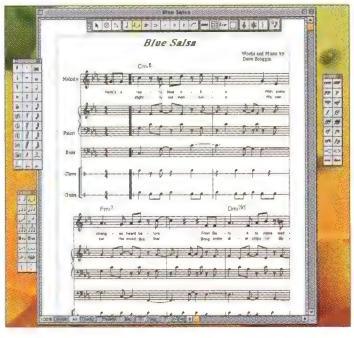
Find the iMac® and accessories at your nearby Sears now. Why go anywhere else?

SEARS

©1999 Sears, Roebuck and Co.
Satisfaction Guaranteed or Your Money Back.
Prices may vary in Alaska, Hawaii and Puerto Rico.

Fermata

Why settle for pen and paper when you can turn your musical ideas into professional-looking sheet music with Opcode's Fermata? Much like typical word processors and page-layout programs, Fermata lets you enter music into your Mac, arrange notes and musical symbols, and print the results. And you can even play back your music using your Mac's internal sounds, or by connecting a MIDI sound module.



You can input music using the QWERTY keyboard (to specify duration) and the mouse (to specify pitch). This is by far the easiest and simplest method; however, if you have a MIDI keyboard connected to your Mac, you can just play and let Fermata transcribe your performance into notation. Before you can do this, however, you'll need to define some parameters, such as split point (so that notes below middle C are written into the bass clef, for instance) and transcription quantization, which defines the smallest duration that Fermata will notate: Anything shorter, say, than a sixteenth note, then gets "rounded up" to this value.

After playing around with different quantization settings, I was able to get a relatively error-free transcription of my performance. Once I had my "raw" music on the page, Fermata gave me all the tools I needed to produce a polished piece of sheet music, complete with copyright info, tempo markings, chord symbols, guitar fretboard diagrams, and dynamics. The crescendos I entered as page elements even played back through my sound module — very cool.

Fermata is only available as a download, and you can try it out for 30 days before purchasing it. Opcode does not provide tech support for Fermata, which is more than a little annoying; however, the program's interface makes it easy enough to accomplish the majority of notation tasks without even reading manuals. But if you do read them, you'll find a complete reference for every function, along with useful tutorials that walk you through Fermata's various note-entry methods and page-layout features. There's no capability for posting sheet music on the Internet, which is too bad. You can export your music as a PICT or EPS file, though, so there's a workaround for the Web-bound.

The Final Decision Fermata fits into the "great bang for the buck" category, offering lots of professional features. It works well as both a stand-alone application, or as a companion to other music programs that offer only the most basic notation capabilities.

— John Krogh

rating 🍎🍎🍎🍎

$60, Opcode
650-429-2400
www.opcode.com

👍 **Professional features, intuitive, lots of useful templates**

👎 **No tech support, can't easily post sheet music on the Web**

Orb SCSI Drive

For many moons, Mac users have been waiting for the Orb. If that sounds a little too cosmic for you, let me bring it down to earth — the Castlewood Orb is the long-awaited and much-touted external drive that reads 2.2GB (gigabyte) Orb disks.

Is it any wonder that we gave the Orb drive the Home Choice award for Best External Storage Device, after we'd only seen it demonstrated? For $200, the Orb comes with more storage space than any other drive in its price range. Also, additional 2.2GB disks are $30 — peanuts compared to the $125 you'd have to shell out for the equivalent Iomega Jaz disk.

In terms of performance, we found that it moves data at an average speed of about 1.5MB per second, which is comparable to the performance of the Jaz. Of course, this is nowhere near the "maximum sustained data transfer rate" of 12.2MB per second that's advertised on the box, but this is to be expected. Advertised rates are often "laboratory" rates that you're not likely to see in "real-world," daily tasks.

The drive is compact, light, and stylish, with a molded plastic case and a folding dust door. One thing I didn't like about the drive was its finicky drive-door mechanism. You have to push the disk in with both thumbs — carefully — or else the disk will pop right back out again. I don't know about you, but when I'm working I like to grab a disk with one hand and slap it into a drive. Also, although it comes with a slew of extra software goodies for Windows users (utilities for maintenance, backup, and cataloging), the current Mac software package is a bit dry — only the driver and a few verification utilities.

The Final Decision If you're looking for an inexpensive solution for external storage and you've got a SCSI-equipped Mac, check out the Orb. For iMac owners, they'll soon be available in USB versions.

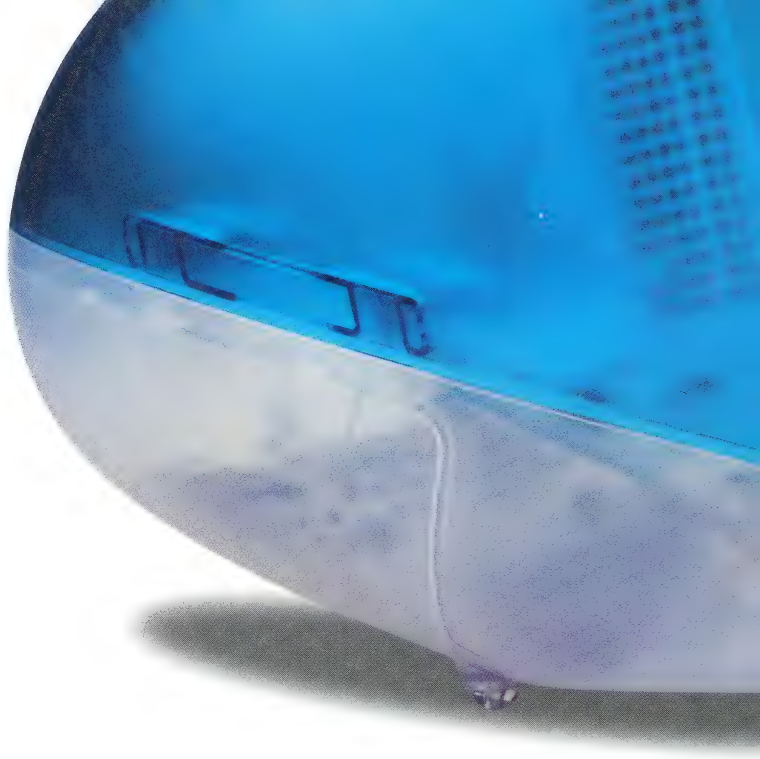
— David Weiss

rating 🍎🍎🍎🍎

$200, Castlewood
925-461-5500
www.castlewood.com
SCSI Required

👍 **Inexpensive, high-capacity disk; comes with one disk**

👎 **Clunky drive door, software extras are Windows-only**



Laser Power for Generation i

Say hello to our iMac™ & G3 compatible Laser Printers and Multi-Function Centers.

When it comes to laser power for iMac, we offer some very solid solutions. Case in point, our HL-1200 series Laser Printers with up to 12 pages per minute, true 600 dpi laser output and more.

Need to make your iMac even more of an all-in-one solution? Good, because our all-in-one Laser Multi-Function Centers deliver faxing, printing, copying and scanning.

If you're part of the Generation ready to change the world, it's nice to know you have a company like us at your side.

Available at: MACWAREHOUSE, CDW, MACZONE, COMPUSA, J&R COMPUTER WORLD, OFFICE DEPOT, OFFICEMAX AND STAPLES

OUR 12 PPM LASER FAMILY

Laser Printing from $299

Laser Multi-Function from $499

At your side.™

brother®

Brother International Corporation, Bridgewater, NJ • Brother Industries Ltd., Nagoya, Japan.
For more information please call the Brother Fax-Back System at 800-521-2846 or visit our web site at www.brother.com
All trademarks and registered trademarks are the property of their respective owners.

The Quick and the Streaming

QuickTime 4 Pro Gets Real

By Alan Stafford

QuickTime has long been one of Apple's finest technological achievements. QuickTime video, music, and interactivity are dominant in CD-ROM software authoring, in professional and amateur video production for television and for the Web, and in the playback of those media on both Mac and Windows platforms.

But it lacked the ability to bring it to you live. The new version, QuickTime 4, addresses that: The free QuickTime Player can display live audio and video broadcast over the Internet — just like television, except that shows can be distributed from anywhere and reach listeners and viewers around the globe.

Stream with the Pros

QuickTime 4 Pro, a $30 upgrade, promises increased functionality over the free version. QuickTime Pro isn't an application; rather, it's a code you can buy that unlocks hidden features in QuickTime's two utilities, Player (which plays movies and music) and Picture Viewer (which displays still images). For example, a JPEG image opened in PictureViewer can't be saved in any other format, unless you've paid for a Pro unlocking key.

QuickTime can open a huge number of audio, video, and image formats. However, it can't yet export MP3 music files. QuickTime 4's snazzy new Platinum interface features a "drawer" for storing the locations of various types of media, but it can't store MP3 files.

And while the Player can show you streaming video, it can't create it — only QuickTime Streaming Server software running Mac OS X Server can do that. And whether you have the Pro upgrade or not, you can't record streaming broadcasts.

The QuickTime Player, even in its Pro version, is quite limited. You must access most editing functions via the menu bar, and some menu options are obscure. To change the size of a movie, for example, you must choose Get Info from the Movie menu, which opens up a tiny window; click on "video track;" scroll down several options; and finally click on "adjust," which pops up handles on the video image. Similarly, the most powerful capabilities of QuickTime Pro are buried behind options that, at first glance, don't seem as if they do much. Worse, some functions are only accessible via key commands that are only detailed in the online help menu — and the only instructions are on Apple's Website.

Growing with QuickTime

Updating the modular components can be very frustrating: When attempting to update from version 4.0 to 4.02, the updater said certain components weren't installed when they really were, and it insisted that other components were already updated. The only solution was to remove every piece of QuickTime software from my system, restart, and then download the entire package anew.

But at the basics, QuickTime 4 excels. Movie quality is excellent over a T1 line, of course, but it's still pretty good with a 56K modem. Video and audio can be choppy over either type of line, due to congestion, but instead of stopping and rebuffering (storing some video as backup) as the competing RealPlayer does, QuickTime Player's quality temporarily degrades — a good tradeoff.

The Final Decision

QuickTime is an impressive technology and great platform for other applications. QuickTime 4 Pro is only necessary if you don't have any other image- and video-editing software, or if you want to save movies off the Internet. Otherwise, stream on without it.

rating 🍎🍎🍎

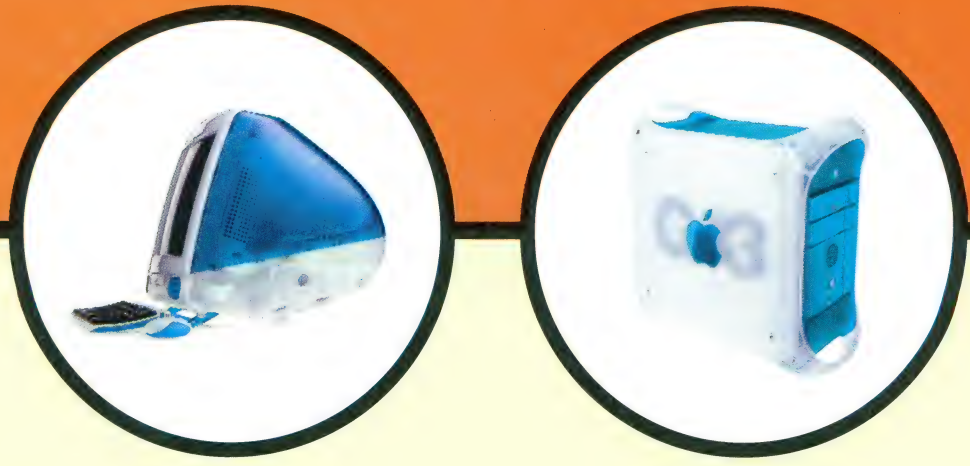
QuickTime 4 Pro
$30, Apple Computer
800-538-9696
www.apple.com

👍 **Pretty interface, good video quality, smorgasbord of compression schemes**

👎 **Commands are buried, difficult updates, annoying shareware ad**

Special limited time offer for MacHome subscribers.
SEE ENCLOSED SOFTWARE OR CALL TODAY!

How Mac friendly is EarthLink?



How about 15 free days and free setup (save $35)!*

Thousands are choosing EarthLink™ Sprint® over other ISPs everyday. Here's why:

- Unlimited Internet access at speeds up to 56K
- More local access numbers nationwide than any other ISP
- Fast, reliable email
- Personal Start Page℠
- Free 6MB Web site
- Toll-free 24-hour help
- New user's guide and member magazine
- Free month of access for every friend you refer
- And much more!

"EarthLink has become the Macintosh of the ISP world — the way for 'mere mortals' to connect to the Net." **[Business Week]**

"The largest independent Internet service provider is also one that caters well to its loyal Macintosh subscribers." **[Mac Central]**

Call today!
1-888-EARTHLINK Ext #3940
3 2 7 - 8 4 5 4

EarthLink™

Sprint®

* Monthly rate is $19.95 thereafter

©1999 EarthLink Network, Inc and Sprint Communications Company LP. Trademarks are property of their respective owners. Sprint and the Sprint logo are trademarks of Sprint Communications Company LP. EarthLink, EarthLink TotalAccess, and the EarthLink logo are trademarks of EarthLink Network, Inc. All Rights Reserved.

By Jackie Dove

You Got to Roll It (Over)

Build JavaScript Rollovers with ImageStyler

If you are a Web addict, then you know all about rollovers. We turn various colors with envy whenever we see those cool JavaScript rollovers on *other* people's Websites.

Rollovers occur when you roll your mouse cursor over a certain part of a Web page and it suddenly changes color, makes a sound, or gives you feedback. We like these engaging interactive effects.

There's no question that rollovers are becoming more popular, what with the design flexibility they afford and their increasing ease of creation. That's because Web designers now have a variety of tools to help them write JavaScript code. In prehistoric times (two years ago), designers were forced to code JavaScript by hand or rely on cut-and-paste, precoded JavaScript. Today, a variety of tools is available to help novice designers achieve professional effects.

What Is JavaScript?

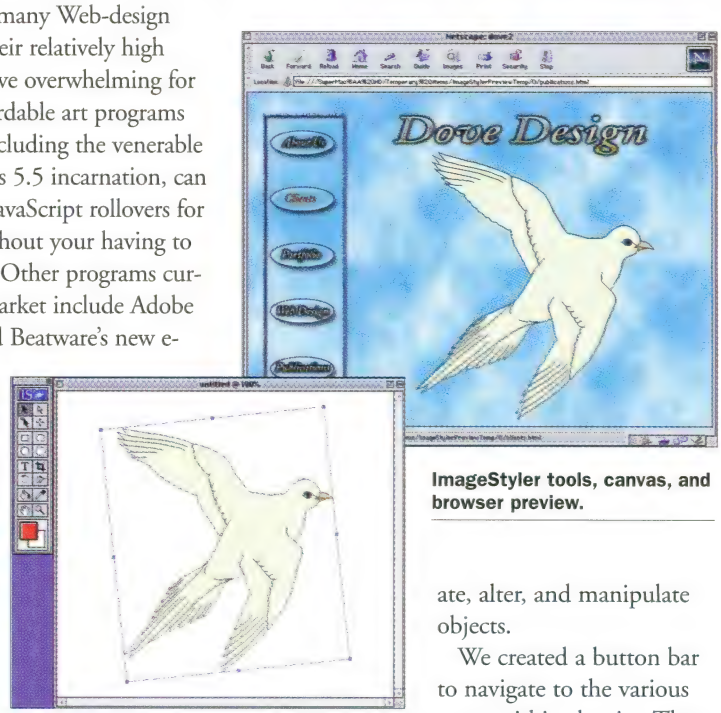
JavaScript is a scripting language invented by Netscape that can (among other things) facilitate changes in the state of objects on your Web page. An object can be a button, an image, a shape, or a piece of type. For example, one of the most popular effects is a "rollover" or "mouseover" change of color, such that when you roll your mouse over a button or a piece of type, it changes. Such effects can also take place when you click the mouse on type or an image.

Imagine having a short sentence pop up when you roll your mouse over a menu, or having your button suddenly sprout a drop shadow, a highlight, or a glow. All these effects can be achieved with JavaScript.

Creation Tools

While advanced Web-design programs such as Adobe GoLive 4, Dreamweaver 2, and others can help you create JavaScript elements, their many Web-design features (and their relatively high prices) may prove overwhelming for new users. Affordable art programs from Adobe, including the venerable Photoshop in its 5.5 incarnation, can program your JavaScript rollovers for you visually without your having to deal with code. Other programs currently on the market include Adobe ImageStyler and Beatware's new e-Picture.

The program we chose for this workshop is ImageStyler 1.0 because of the range of tasks it can accomplish, its simplicity, and its price. ImageStyler can be used with any Power Macintosh.



ImageStyler tools, canvas, and browser preview.

Rollovers in ImageStyler

In the following example, we will create a dynamic main menu from a static one by converting plain text into rollover text with multiple effects. The menu is designed for a small graphic-design shop called *Dove Design*.

The first thing we did was launch ImageStyler by double-clicking on its icon. With a blank canvas on the screen, we proceeded to construct a cover page for the new *Dove Design* Website. Several tool bars and palettes also open with the blank canvas, and these allowed us to create, alter, and manipulate objects.

We created a button bar to navigate to the various pages within the site. There are five menu items: About Us, Clients, Portfolio, Publications, and Websites. We began by clicking the rectangle tool to select it and by clicking, drawing, and finally rescaling the shape using the

Transform palette so that it ran the length of the page. If you want to move your object on the page, just click the pointer tool, place the arrow inside the object, and drag it.

We used a background Photoshop image as the texture for the navigation bar, simply by dragging its icon to the rectangle and dropping it inside. We then added a 3D effect to this rectangle by choosing the 3D palette and selecting Emboss. We adjusted the lighting, angle, and depth of the Emboss feature until we were pleased with the result. We also added a style called Marble Picture Frame to make it stand out from the rest of the background.

Now that we had our navigation bar, we needed to create buttons for it. ImageStyler gives you a set of pre-defined styles and virtually infinite ways to adjust them for a unique look. So, using the predefined styles, we chose the rectangle tool to create the buttons. After sizing the rectangle, we made four aliases of it. Aliases are not copies: Any changes you make to one alias button is automatically adopted by the other buttons. Thus, we were able to set the same styles to all buttons simultaneously. We then changed the shape of the buttons into ellipses by choosing that option from the Properties palette.

Buttons in Styles

Well, we didn't want just any plain old ellipse buttons, so we added some elegance to them by choosing different styles from the Styles palette. We selected the Magnifying Glass style and applied it to all the buttons. Then, one by one, we moved the buttons into the navigation bar by dragging and dropping them. We then selected all the buttons and chose Object, Align Horizontal Center, and Distribute Vertical from the pull down menu, which placed them equidistant from each other inside our menu bar.

Next, we had to add text to the buttons. For that, we used the Type tool to select the typeface and add effects to it. We selected the Georgia typeface and typed in the first button, "About us."

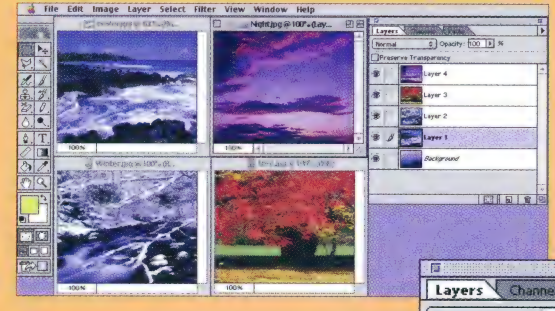
Try this at home

Get these examples on the MacHome Website at **www.machome.com/download**

Photoshop GIFs Rock

If you are serious about creating Web graphics, you will need a powerful image-editing program, and Photoshop is the matriarch of image editors. The inclusion of ImageReady 2.0 in the new version is significant for Web designers (see review in the October issue) who have a yen for animated GIFs.

In Photoshop 5.5, we created an animated advertisement for a fictional photography school that specializes in landscapes. Our aim was to demonstrate the kinds of shots that we would teach the students.



To make GIF animations in Photoshop, you need to work with Layers, which lets you place separate images in different layers that will comprise your animation.

First, we launched the program and assembled five landscape shots that we either scanned or shot with a digital camera. We then resized those photos so that their dimensions matched. Then, we created a text advertisement with the Type tool.

When we had all of our frames assembled, we built the animation. Here we chose an image to serve as the background, and then used the Move tool to click and drag the other photos on top of that same window. To view or hide layers, we clicked and unclicked the eye next to that layer. The Text tool creates a new layer.

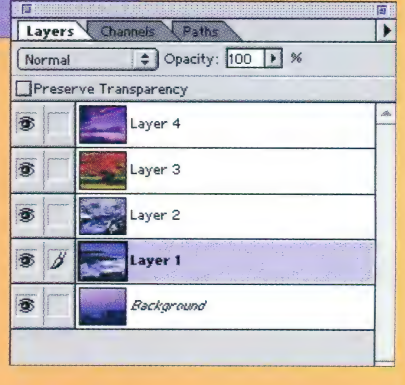
While Website photos are generally displayed as JPEGs, if you want to post them to your Website as animated GIFs, you will have to convert them to GIFs. You can do that later in ImageReady.

Now that we have all our layers, it's time to combine the images into an animated GIF.

Jump To

We used the Jump to function in Photoshop to open the layered image in ImageReady. The image that you have opened from Photoshop now appears as the first animation frame in ImageReady.

In the Animation palette, click the Create New Frame icon. That will create a duplicate of the previous frame. Then, go to the Layers palette and click on a new layer to select it, then click the eye off of the previous layer. The new frame changes into the image on the layer you have selected. Repeat this action with each frame of your animation. To merge the text with the last photo, we turned the eyes on both of them.



Betwixt and 'Tween

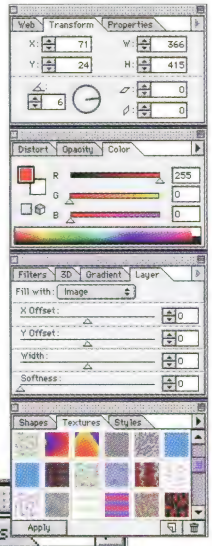
Within the animation palette, you can select multiple frames, add and delete frames, and change their order by clicking and dragging. We selected multiple frames in order to tween them, or provide a smooth transition between (tween) them. Using the Tween function, you don't have to create each layer separately. You'll also want to optimize your image in the Optimize palette and, when you're ready, save it as a GIF.

When you are finished constructing the animated GIF, preview it in the browser. When you are happy with it, upload it to your Website.

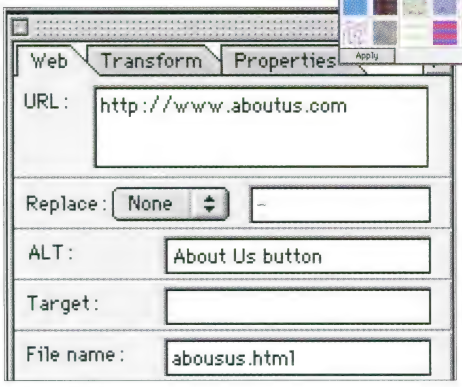
Then we added another effect from the Styles palette called Gold Plate and clicked the Apply button. We also centered the type in the Properties palette. After we had the first button set, we duplicated the type four times to make the other buttons. We did not make aliases because we didn't want changes in one button to be applied to the other buttons. We then set the type in the other buttons to read "Clients," "Portfolio," "Publica-tions," and "Websites," adjusting the type size as needed.

We could have stopped right there and set the rollovers for these buttons, but ImageStyler actually lets you design a whole Web page. So we stayed on this roll.

Designing with ImageStyler



ImageStyler toolbar and palettes let you manipulate images and type and add special effects.



ImageStyler Web palette creates image maps.

We decided to build a headline that read *Dove Design*. We selected the Type tool again and typed "Dove Design" in 48-point type. You can choose the type size from the dialog box within the Type tool, you can drag the corners of the type when it is selected, or you can use the Properties palette to enlarge or shrink type.

With the type selected, we applied the Mercury style to it. You can apply up to five styles per object, so we also applied the Gold Plate style. We wanted to create a drop-shadow as well, so using the Layer Offset tool, we selected the Glow layer in the Object Layers palette and moved it down and to the right.

Now it was time to place our main image, the dove, on the page. Under the File menu, we clicked Place, located the image in our hard drive, and placed it on the canvas along with a background image of the sky, which we placed using the Place as Texture command.

Image Maps

An image map is a single image that is sliced into different pieces, with each piece hyperlinked to a different Web page. ImageStyler can create image maps such that each button on the Navigation bar will link to pages within the Website. Just click on each button and, in the Web palette, type in the URL.

Rollover Actions

Select the JavaScript palette and click on the New Action button. The new action is OnMouseOver by default. We chose Interior Glow in the Styles Palette for the mouseover. For each button, we added the same style.

When we finished that operation for each button, we saved our layout as an ImageStyler document, which lets us go back and edit it later if we wish. Under the File menu, we chose the Save As... option and named the file dove.ist (the suffix is for ImageStyler).

Through the Browser

We then previewed our work in Netscape by clicking File and Preview in, at which time ImageStyler writes the HTML code and lets you view it in the browser. When we were satisfied with the way the page looked, we exported it as a Web page using the AutoLayout option (one of several options). In the Export palette, we chose the Export file format (GIF or JPEG works best). Once exportd, your HTML and image files are now ready. Open, edit, and save your HTML in a text editor, then send it and your images online.

Adobe, 800-833-6687, www.adobe.com MH

Coming Alive! GIF Animations

We've been throwing around the term animated GIF, but what exactly is this thing? As you may know, GIF is an acronym for Graphics Interchange Format, a file format that was originally developed by CompuServe specifically to compress and transmit images over its online service.

GIFs have become the default file format for graphic art in the Web-design world. There are many other image-file formats, but none are as universally supported as the GIF.

When you convert an image file into a GIF, you are applying a compression formula designed to reduce the size of images that contain large blocks of a single color. GIFs do not lose information in compression, but they are limited to only 256 colors.

Actually, there are two kinds of GIFs — the GIF 87a and GIF 89a. The GIF 87a was invented in 1987 and the GIF 89a, two years later. The GIF 89a can do more things, including carrying multiple images in a single file. Such files are called multiblock GIFs, and these are used to create animations. All major browsers now support GIF animations, and thus they are now considered a universal part of Web design.

You can set animated GIFs to loop, or play over and over again, indefinitely, but the neat thing is that once they are downloaded from the server, they reload from the browser cache (or memory) for subsequent iterations of the loop.

That means that once a page with a GIF animation is downloaded, it can run even after you've pulled the plug on your network connection.

Shop Till You Stop Injustice

Commerce Site Alters Shopping Concept

It's getting toward the time of year that Bookmarks dreads the most — the holidays. Maybe it's all of that festivity. Then again, perhaps it's all of those presents to buy and the inevitable mall to visit or avoid. Can you relate?

Working Assets, well known as the politically progressive long-distance telephone company that sponsors call-in and fund-raising campaigns for human rights, civil liberties, free speech, and environmental issues, has introduced ShopForChange.com, a Website designed to assist with both your shopping and charitable concerns. If you take a stand on peace, social justice, educational, and environmental issues, ShopForChange.com helps you support them.

The concept behind ShopForChange.com is to link you to your favorite retailers and support your favorite progressive causes at the same time.

With ShopForChange.com, every time you make an online purchase, Working Assets makes an automatic donation to its slate of 50 nonprofit organizations, totaling 5% of your purchase, at no cost to you.

"Working Assets is dedicated to making it easy for people to leverage their everyday actions — like talking on the phone or using a credit card — to effect social change. With the growth of online shopping, we were drawn to a way for people to promote progressive social change," explains Larry Litvak, chief financial officer of Working Assets.

ShopForChange.com features more than 40 popular online retailers such as Amazon.com, JC Penney, and Esprit, selling books, software, CDs, flowers, food, toys, sporting goods, clothing, and more. While ShopForChange.com contracts with large retailers, it also gives equal time to smaller, less popular vendors, Litvak says. The books section of the shopping pages includes WordsWorth and Powell's Books, both independent bookstores. Abundant Earth, HearthSong (nonviolent toys for children), and The Green Pages Store (which, Litvak says, is extremely popular with ShopForChange.com's 43,000 registered users) are also included.

With ShopForChange.com, you can simultaneously give to organizations such as Planned Parenthood International, Human Rights Watch, Fund for Investigative Journalism, Stand for Children, Friends of the Earth, and others.

What if those organizations don't ring your chimes? ShopForChange.com customers can also nominate groups to receive donations and vote on how to distribute the funds. Make your voice heard with ShopForChange.com, which features a section called "Suggest a Merchant" that lets you add a retailer to the list. The Website also features an Activism page highlighting a monthly e-mail campaign.

And if that's not enough to convince you to shop for change, get this: First-time ShopForChange.com customers get a coupon for a free pint of Ben and Jerry's you know what.

Shop For Change, www.shopforchange.com

We're All in This Together

While you're visiting Shop-ForChange.com, check out the Donations page, which contains links to the Websites of organizations it supports.

The Center for Victims of Torture

provides direct care to the victims and families of politically motivated violence around the globe.

The Human Rights Watch Website documents human rights abuses around the world with news stories, campaigns, photo essays, and more.

The Rainforest Action Network (RAN) Website contains beautiful animations that grab your attention. Clicking on any of the illustrated sections takes you to more information.

Project Censored, an annual nationwide media research project sponsored by Sonoma State University in Sonoma, California, exposes stories that are either shunned or spun by the corporate mass media.

The Center for Victims of Torture, www.cvt.org
Human Rights Watch, www.hrw.org
Rainforest Action Network, www.ran.org
Project Censored, www.sonoma.edu/Projectcensored

By John Poultney

Top 10 Children's Software

You didn't think we'd leave the children out in the cold, did you? There's lots of great software out there for the young people, and we present to you forthwith our pick of the best 10 titles we've reviewed in these pages.

The Gungan Frontier

$30, Lucas Learning
415-448-8000
www.lucaslearning.com
Ages 9 and up

Yes, it's a *Star Wars* title, so you know your kids will play it — even if the movie didn't live up to its rather grandiose expectations.

The Gungan Frontier is great for the mind as well as the imagination. Kids are charged with the duty of helping Boss Nass and Jar Jar by building an ecosystem on a moon of Naboo (What do you mean you haven't seen it yet?). Kids must create their own food chain and maintain its balance in order to win. By placing plants and animals on the surface of the Nabooan moon, kids start to create their own environment. It's a difficult task keeping enough food for everyone and making sure that the species you select get along well.

This title is not only well written, it's the only game that focuses exclusively on the food chain and how species are interelated. Just don't let loose too many Rancors.

— *Alex Handy*

Uncle Albert's Magical Album

$30, V-Tech
800-742-1050
Ages 8 and up

Crazy old Uncle Albert has left you his journal and it's your job to navigate through it in order to find the treasures held within. This is definitely not your typical learning-title premise. *Uncle Albert's Magical Album* is laid out in a nonlinear fashion that allows you or your children to explore at your own pace. Each page leads to other areas in the book, most of them hidden. As you uncover new pages, you find new items, animals, and information about your uncle. The story unfolds with the help of many learning-based puzzles. These puzzles encompass everything from biology to music to astronomy. This is one of the few titles that manages to cover a broad range of educational topics — a nice touch in a world where most learning titles hover around the same goals.

— *Alex Handy*

Kid Pix Studio Deluxe

$30, Broderbund
800-521-6263
Ages 3 to 12

Kid Pix is a terrific playground for kids' imaginations. Not satisfied with being a nifty little paint program for kids, *Kid Pix* allows kids to do just about anything you can imagine. There are six distinct projects ranging from cartoon character manipulation to making a puppet show. Also included are over 600 pieces of clip art and 260 real-world maps. Kids can make greeting cards to attatch to e-mail, and even make them talk. There are also cut-outs and paper dolls to print and decorate. No matter what your kids like, this one is an all around crowd pleaser

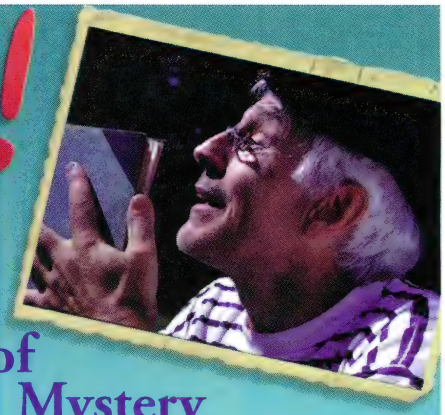
— *Art Jones*

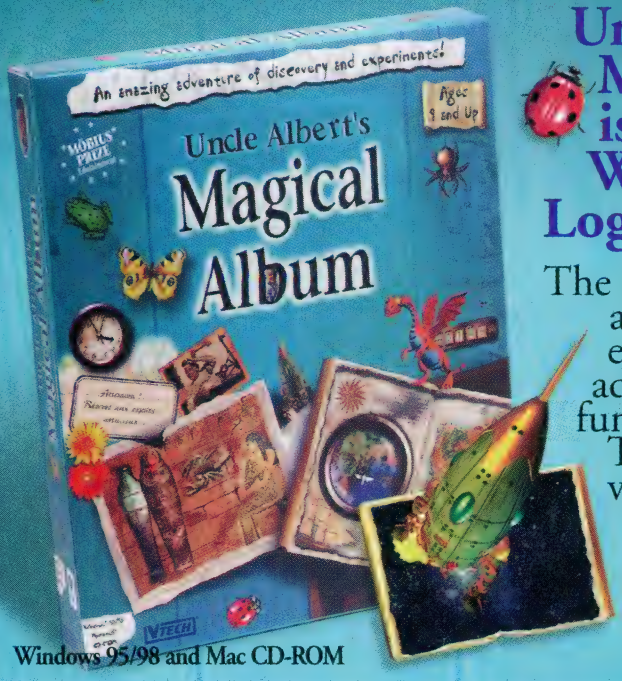
Barbie Fashion Designer

$45, Mattel Media
888-628-8359
Ages 6 and up

Kid Pix may have paper dolls, but for the true fashion lover, there's only one choice. With *Barbie Fashion Designer*, your kids can print out hundreds of new outfits onto special paper. Then, kids add their own ribbons, glitter, and sequins. All you need is an inkjet or laser printer. The package comes with the CD, a pack of fabric paper, all sorts of decorative goodies for your clothes, and much more. And just in case Barbie can't find a pair of shoes to go with her new outfits, there are five pairs included in the box. It's a great

Meet Uncle Albert!





Windows 95/98 and Mac CD-ROM

Uncle Albert's Magical Album is an Award-Winning Game of Logic, Science and Mystery

The Magical Album is an amazing adventure of discovery and experiments that combines adventure and action in a realistic, fun world.

To view a demo and enter contests, visit www.vtechsoft.com/album.html

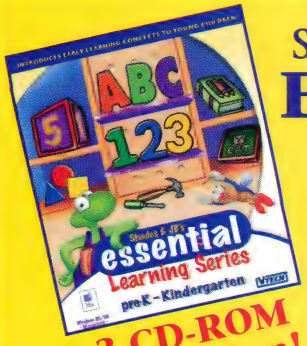
MacHome

MÖBIUS PRIZE Edutainment

Published by VTechSoft
www.vtechsoft.com

VTECH

Great NEW Mac Titles From VTechSoft

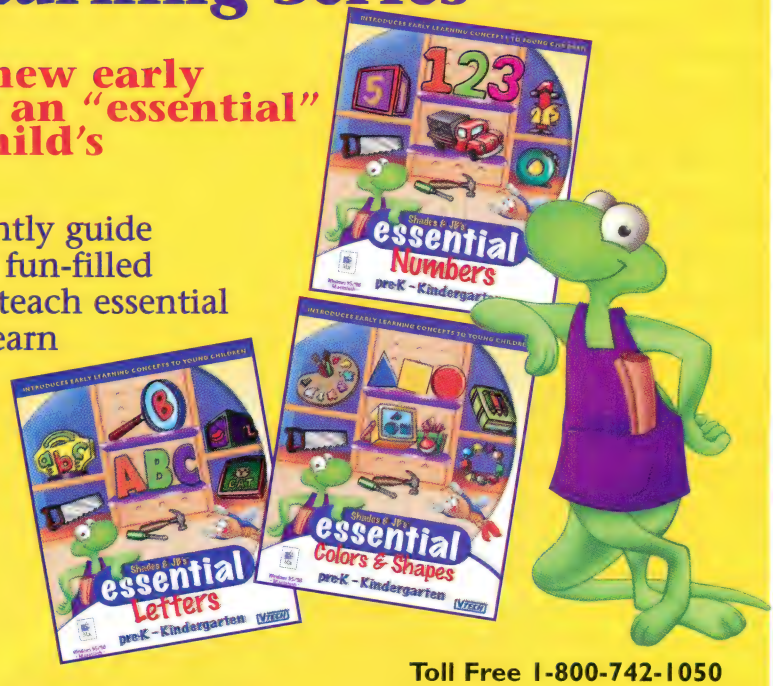


3 CD-ROM Collection! Learning Series

Shades & JB's Essential Learning Series

Make VTech's new early learning series an "essential" part of your child's education!

Shades and JB gently guide children through fun-filled activities to help teach essential skills needed to learn numbers, letters and colors & shapes



- Adjustable skill levels
- Printable coloring pages
- Printable diploma

Ages 3-6 years

Windows® 95/98 / Mac CD-ROM

VTECH

Published by VTechSoft
www.vtechsoft.com

Toll Free 1-800-742-1050

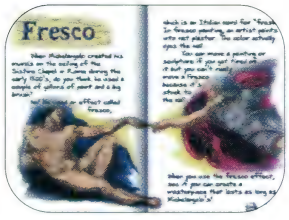
way to show kids that the Mac is a cool creative tool. A new dimension of artistry is opened up to girls who enjoy dressing up their dolls.

— *Carrie Shepherd*

Crayola: Make a Masterpiece

$20, IBM
800-508-1496
Ages 5 to 12

While Kid Pix focuses on letting kids run free, IBM's *Crayola: Make a Masterpiece* attempts to give children a more artistic approach. Kids can play with virtual markers, oil paints, and even food without creating a mess or attracting ants. It's simple, it's fun, and it provides all the tools kids need to produce stylish artwork Also included is information on art history, allowing your kids to learn about the great masters. Any kid with an interest in art will love *Make a Masterpiece*. It's a great way to while away the hours creating beautiful pictures.

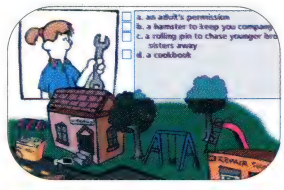


— *Ellen Rush*

Sesame Street: Elmo's Reading Preschool &Kindergarten

$25, Creative Wonders
800-543-9778
Ages 3 to 6

Elmo, Elmo, Elmo! When he's not getting tickled to death, the fabulous Elmo is teaching your kids how to read. This title uses all the *Sesame Street* charm to help kids grasp the basics of reading. The rest of the cast makes cameos, including Grover and the Count.



A great example of what makes this title great is the Zoetry Poetry section. Set in a beatnik cafe, kids help to complete Zoe's simple ryhmes while Elmo accompanies her on the bongos. As always with *Sesame Street*, it's the little jokes that kids won't get that make it great.

— *Amy Shafron*

D.W. the Picky Eater

$30, Broderbund
800-521-6263
Ages 3 to 7

Featuring everybody's favorite … uhm … to be honest, I never did learn what kind of animal Arthur is. Well, it matters not, because in his latest digital incarnation, Arthur has to help his little sister, D.W., learn to eat new kinds of food. Along the way, kids learn vocabulary skills, logic, hand-eye coordination, word recognition, and, of course, reading. Your kids will love this title because it is not only a learning game, it's a book with which children interact. The vivid illustrations come to life at the click of a mouse.

But the real draw of the *Living Book* series is the underlying story. *D.W. the Picky Eater* is not simply a learning title; it's a book that children can read or have read to them. As the story is read, spoken words are highlighted, making it easy for children to follow along.

— *Art Jones*

School House Rock 3rd & 4th Grade Essentials

$25, Creative Wonders
800-543-9778
Ages 8 to 10

Conjunction Junction, what's your function? Hookin' up words and phrases and clauses .... Ah, the joys of showing your kids what you watched at their age. The *School House Rock* series of learning titles holds onto the same inspiration and creativity that made the original television show so wonderful. All the characters you loved on the Saturday morning cartoon are being brought back to life for the digital age and a whole new generation. Interplanet Janet leads kids on a learning spree around the *School House Rock* universe, teaching them everything from math to vocabulary.

— *Art Jones*

Cook'n For Kids

$30, DVD Enterprises
888-462-6656
www.dvo.com
Girls, Ages 8 to 14; Boys, Ages 8 to 90

This title is perfect for anyone who's getting tired of working in the kitchen alone. It teaches kids everything about cooking, from the basics to the advanced. Kids learn what utensils to use, what ingredients to add, what tastes good, and what tastes icky. Allowing kids to get their hands on food in the kitchen also helps to breakdown those picky eating tendencies: Little Joey might be more open to eating peas if he gets to make them himself. A word of warning though: this might cause you undue kitchen messiness.

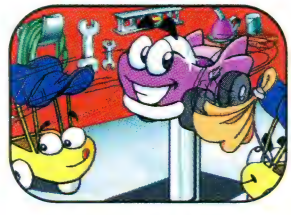
— *Amy Shafron*

Putt-Putt Enters the Race

$30, Humongous Entertainment
800-499-8386
www.humongous.com
Ages 3 to 8

Putt-Putt Enters the Race finds the cheerful purple convertable eager to enter the Cartown 500. But first he needs to get some radial racing tires, high-octane gas, a flag with his number on it, and a safety helmet for his pal, Pep. So begins his adventure around Cartown, searching for the required items.

This adventure game is easy enough for youngsters to play, but is still engaging for older players too. Putt-Putt meets many motorized characters on his mission — some who need his help and some who'll help him out, too. Logic comes into play: Where was there something to get that cat out of the tree?



Kids will want to play *Putt-Putt* again and again because the quests change each time they play. Also of interest is the catchy music, some of which is worthy of the big screen.

— *Carrie Shepherd*

By Alex Handy

Lassie! Granny's trapped!

Cyber Grannies are coming; run for your lives! Kutoka Interactive, the makers of *Mia: The Search for Grandma's Remedy*, are readying another barrage of grandmother-induced fun. *Cyber Grannies* is all about numbers, vocabulary, music, memory, and all sorts of other skills. There are 26 Grannies in the game to learn from, each corresponding to a letter in the alphabet. Three- to six-year-olds will be able to bounce from granny to granny, exploring new worlds and finding hidden activities. It's the first time all the fun that is a grandmother has been squished into one CD-ROM.

Kutoka Interactive, 514-525-2222, www.kutoka.com

Leggo My Legos

Mindstorm is really cool. You've seen it at Toys R' Us. It's the new wave of Legos. *Mindstorm* is a basic set of bricks, plus software to let you program what you build. The kits include motors, belts, gears, and all sorts of fun stuff to allow you to create the giant robot monster of your dreams. Best of all, you can use the leftover blocks to build a city for your home-made MechaGodzilla to stomp into the ground. Is there anything more educational than a teenager building robots to destroy his room? We think not! *Mindstorm* has been PC only for a long time, but word around the campfire is that it will be making landfall on the Mac soon. Let all pray that no evil geniuses get hold of a box.

Lego, www.legomindstorm.com

They're Back?

Toy Story 2. It conjures up images of Steve Jobs wringing his hands over profits, doesn't it? Fortunately, the upcoming sequel to the first computer-generated movie should be better than most sequels. For starters, it's got Mel Gibson and Tom Hanks as the voices of Buzz Lightyear and Woody, respectively.

Aladdin 2 did not have Robin Williams, and thus, it stunk. Disney's hoping this digital sequel can break its sophomore jinx. With the help of little *Toy Story* fans everywhere, it should have a hit on its hands.

Of course, a little merchandizing can't hurt either! *Toy Story 2*, the action game from Disney Interactive, should be out some time this January, and it will feature all the characters from the movie. Slinky Dog, Mr. Potato Head, Hamm, and Rex the timid T-Rex are all back to keep your youngsters occupied and entertained. The game will be fully 3D and follows the story of Buzz as he tries to help rescue the kidnapped Woody. The action is fast and furious as Buzz flies, jumps, dives, and runs through tons of fully rendered levels.

In case you're wondering, the actual movie will be out sometime around Christmas. Steve Jobs gave the world a sneak peek of it at Macworld Expo, New York, this past July. Perhaps it's a little nepotistic to advertise for your "other" company (he is still the CEO of Pixar, remember), but there's some cosmic force that makes the tie-in seem perfect for the iMac market. Color us crazy, but we think this game could be pretty big, seeing as it's the first movie tie-in game to come out on the Mac in a long time.

Disney Interactive, www.disneyinteractive.com

Foolish Earthlings

Maybe whilst perusing some Christmas gifts for your second cousin twice removed you stumbled across The Stone, a curious little pyramid-shaped box with a pendant inside. The Stone was a nifty piece of neckware that gave you access to an online puzzle community. Now that Abject Modernity Internet Creations, Inc. has broken into the market, it's readying Earthlings, a children's version of The Stone.

The package includes a necklace with symbols on it. These symbols are kids' password for the Web-based world of Earthlings, a world filled with mind-crunching puzzles and tons of other Earthlings. Some of the puzzles can require kids to search for information on the Internet. The Stone often required intimate knowledge of impossibly archaic information to solve puzzles, which necessitated a few trips out into the icy waters of the Web. Once you found the info you were looking for, you could return to The Stone's Website and use it to solve the puzzle.

It's this sort of thing that makes the stuff of Earthlings. And best of all, there's no software!

Abject Modernity Internet Creations Inc., 888-230-8465, www.abject.com

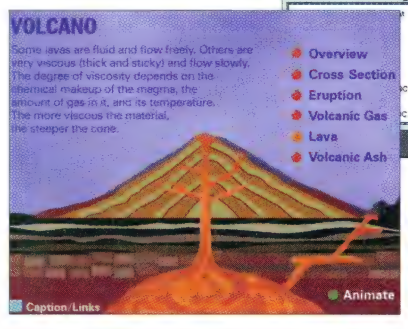
Year 2000 Grolier Multimedia Encyclopedia Deluxe 2-CD Edition

$50, Grolier Interactive
203-797-3530
gi.grolier.com

Okay, so you can't stack up this encyclopedia to reach the top closet shelf. But in every other way, the *Year 2000 Grolier Multimedia Encyclopedia* (*GME*) is superior to its book counterparts. From online updates to hypertext words to sounds, videos, and animations, you just can't do better than a CD-ROM encyclopedia.

Getting Started

Naturally, an encyclopedia is most useful if you're actually doing research. But even if you don't have an idea for a research project, *GME* can give you some jumping-off points. A click on the Articles button brings up a scrollable list of 37,000 articles, listed alphabetically. If that's too overwhelming, you can choose from a list of Topics, such as Geography, and Sub-Topics, such as National Parks and Monuments



If you do have a specific topic in mind, you can perform a search, which you can broaden or narrow by choosing among Boolean operators (and, or, and not) — kind of like using an Internet search engine such as Hotbot.

The extremely idea challenged will appreciate the Research Starters section, which presents 50 topics under seven major subject areas. Each topic has an introduction and a list of all the information pertaining to that topic. You can then explore the aspects that interest you. However you use it, *GME*'s interface is clean and intuitive, especially given the variety of options.

Tools

There are plenty of tools to keep you focused and organized — keeping track of your encyclopedic meanderings is extremely easy. As you research a topic, you can collect articles and media under topic lists with a Marker feature. Even if you fail to include something in your list and later regret it, the History button will show you which articles you've explored during your research session.

The Knowledge Tree shows you branches to take from your research, so that you can move up and down along topics and subtopics. You can also copy text and images and paste them into your chosen word processor; when you paste, a footnote reference containing the copyright information comes up automatically (all *GME* material is subject to copyright laws).

Quality of Information

As those of us who use the Web regularly know, just because it's easy to research something doesn't mean the information you get is good. Getting information from a source such as Grolier is preferable to John Q. Public's Website, of course, if only for the source's credibility. Even so, an encyclopedia, even a CD-ROM version, can't contain the depth of information on a topic that a book dedicated to that topic can. Therefore, the Bibliography at the end of each article is great for more in-depth reading.

What *GME* does that a book can't, though, is provide online connections that update and supplement its articles. Updates and new articles are also posted monthly to the Grolier Website; a simple click on the toolbar will bring you there. *GME*'s Online Knowledge Explorer also provides online links to articles from *Grolier's Encyclopedia Americana* and *New Book of Knowledge*.

GME's multimedia aspect is not all eye candy either. Words can't really describe the chirp of a catbird — so *GME* lets you hear it. Likewise, it's much easier to understand the behavior of cancer cells when you watch a movie. There are also fact boxes, animations, tables, and panoramas, and plenty of enlargeable pictures — which just occasionally seemed slightly fuzzy.

Extras

Ever read an encyclopedia article and been stymied by the vocabulary? Every word in *GME Deluxe* is hyperlinked to *The American Heritage College Dictionary*. Double-click, and the definition comes up. This worked on every word I tried, even "the."

There's also a timeline that lets you look at centuries at a glance or search for events by year. And if you register *GME Deluxe*, you can access the *New York Times Book of Science Questions and Answers* — which truly makes learning fun.

At $50, *GME Deluxe* is quite a bargain and highly recommended for students and families.

— Carrie Shepherd

Drawn with Pablo.

Dare to go where no mouse has gone before.™

Whether you're launching a web site, editing the family photos or animating greetings to your friends, Pablo-Internet Edition takes you to a graphic realm you just can't visit with a mouse — with twice the drawing surface for the price and a pressure-sensitive pen that's as intuitive as the kind you use on paper.

Pablo-Internet Edition, comes with a graphics suite of software valued at over $100 that gives you all the tools you need to animate, edit, e-mail documents, and create cool graphics for the web. Plus it works with all software, making it the best value this side of Andromeda. If you've got the vision, Pablo can take you there.

Changing the Way the World Creates.

www.kbgear.com

Only $79 after rebate!

KB GEAR INTERACTIVE

© KB Gear 1999

Spelling Underwater with Spelling 1-2

School Zone Interactive, $20
www.schoolzone.com
Ages 6 to 10

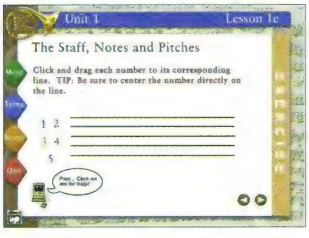
Neptune's Cave, Sunken Galley and Coral Reef hold totally different treasures in *Spelling 1-2*. Over 1,700 words are hidden deep within these confines and they are holding fish captive. Well, sort of.

In this game fish are freed by correctly spelling each word in a list of eight. Once a list has been completed, a fish is released. The number of correctly spelled words as well as the number of words that need more work are recorded (but not saved!).

If your 6- to 8-year-old needs to focus solely on spelling, word recognition, and listening, this may be just the right software. *Spelling 1-2*'s colorful interface should be easy for most children to use. However, with so many action games on the market it may be a little slow and boring for some.

There is no online dictionary to provide meanings or syntax, and there is almost no other action in the game. This is not bad, mind you, just very narrowly focused. A PowerPC is required.

—Art Jones



Alfred's Essentials of Music Theory Vol. 1

Alfred Publishing Co., $40
818-892-2452
www.alfredpub.com
Ages 12 and up

"Hey, Now, You're a Rock Star …" Well, maybe not yet. If you're a wanna-be that's never even had a music lesson, then *Alfred's Essentials of Music Theory* is a good place to start.

Volume 1 covers basic music theory and terminology. The interactive CD-ROM includes narration, animation, exercises, and games as reinforcements. There are even ear-training exercises at the end of each unit, utilizing a variety of instruments. If you forget a term, just click on CHIP, the Mac icon at the bottom of the screen, for help.

The program can be used in conjunction with classroom course work or as a standalone. Music teachers will love the fact that students can work at home and copy to a floppy or e-mail their student file to school for classroom work. They'll also probably like the monitoring and testing features, for smoother classroom workflow.

First in a series of three CD-ROM courses, Volume 1 is designed for the individual wanting a better understanding of the language of music. It won't make you a rock star but you'll be able to talk a good game.

—Art Jones

Wimzie's House: Play Along With Wimzie

Simon & Schuster Interactive, $29
www.ssinteractive.com
Ages 2 to 5

If your preschoolers are tiring of Teletubbies (and you're not so thrilled with the colorful quartet anymore either), it might be time to check your local PBS listings and graduate to *Wimzie's House*. The show and the first CD-ROM to accompany it, *Play Along With Wimzie*, welcomes children into a learning environment that focuses on emotional and interpersonal growth.

Each in this cast of puppets, led by Wimzie, who is part bird and part dragon, has distinct physical and mental attributes; kids are taught early on that they're not carbon copies of each other. Wimzie's Family Portrait best demonstrates this when players are asked to fill in the frame by matching particular objects to owners.

As they guess correctly, the frame brightens up with faces, and kids learn to differentiate according to the individual traits of each character. Some clues may stump your kids if they haven't acquainted themselves with the characters on television first — this inadvertently teaches them the process of elimination.

The Book of Feelings takes children a step further. This game asks kids to distinguish feelings (including sadness, anger, happiness, fear, and love) displayed by characters in actual footage from the show. (If your kids are Wimzie fans, they'll love recognizing these scenes.) After the clip is shown, kids must click on the face that matches the feeling demonstrated by a particular character. This is the best in the five-game set, because it allows kids to recognize that flowery feelings are not the only ones necessary in life, and because it allows for mistakes. Instead of overloading children with chances, a "wrong face" icon appears at the top of the screen — they may not like this, but one hopes they'll come to understand that perfection is not the goal.

Other games challenge memory and observational skills, and all except The Bickering Bunch are slow paced. Oddly, here is where kids will get bored as they're asked to continuously click on the same images to succeed.

Especially if your kids love the show, they're sure to *Play Along With Wimzie* every chance they get. They'll laugh and learn and, most importantly, become more aware of their own identities and the identities of those around them.

— Carolyn Blackburn

How do you turn this thing OFF?

SPY Fox™ is set for another one of SPY Corps' toughest assignments. Your mission is to help thwart Commander Napoleon LeRoach™ in his robotic tracks!

SPY Fox™ 2 "SOME ASSEMBLY REQUIRED"™

exclusively on CD-ROM!

HUMONGOUS ENTERTAINMENT®

©1999 Humongous Entertainment, Inc. All Rights Reserved.

www.humongous.com

By Alex Handy

Top 40? Naw, 10's Fine

A long-distance dedication going out to all you Mac gamers

After years of gaming on the Mac, I felt it was time to step up with the big boys. If you've ever walked by the video-game magazine aisle at your local newsstand, you've probably noticed that every PC game magazine has its own "Best of all Time" list.

Yet in over ten years, there's never been an authoritative list of the best Mac games ever (read I've never done one). So, I put on a pot of coffee, turned on some suitably hypnotic background music, and proceeded to figure out just which games belong where on the list.

After weeks, nay, months of torturous debate, I have for you today the be-all and end-all of Macintosh games. These are games that kicked butt when they were released, kicked butt three weeks later, and still kick a certain degree of buttocks today. So without further ado, on to the list!

10: Full Throttle

LucasArts, 1995

I knew that Lucas Arts was going to have an adventure game somewhere in this list; I just didn't know which one or where. They're all so darned good! *The Dig* has a wonderful sci-fi storyline, while *Sam and Max Hit the Road* is arguably one of the funniest games ever created (see the demo on this month's *MacHome* CD). But in the end, there was really only one choice: *Full Throttle* is one of the few adventure games that remains accessible to the casual gamer, yet still has the power to suck you into its world. And it has Mark Hamill's voice!

Set in the near future, the game reeks of that pseudo-'50s charm that permeates so many Lucas Arts projects. I can still remember all the words to the bizarre country song that plays in the background in some scenes of *Full Throttle* ("The population is greatly decreased, and so my odds are greatly increased, that some day I'll get a chance to kiss your lips. I thank the lo-o-ord each day for the apocalypse.") While the graphics and sound were absolutely state of the art, it was the writing that made the game great. Not only is the plot engrossing, but the witty banter and one-liners keep you laughing: "This is really like a religious pilgrimage to me … a religious pilgrimage with a lot of butt-kicking."

You take control of Ben, the motorcycle-riding tough-guy who's on a quest to save the owner of his favorite motorcycle company. Along the way you bump into all sorts of interesting characters, ranging from newspaper reporters to high-tech biker gangs. This game ain't no cruise in the park. Sections of the game require you to take down bikers in high-speed fist-fights on the open road. You can even steal weapons from rival scumbags, such as chainsaws and 2 by 4s. The puzzles are equally challenging, with the final brain bender taking the cake. Although there are plenty of hints hidden in the game to help you along, I spent hours wracking my brain for the solution to some of the puzzles.

Number 10

Top 10 Games

1. Marathon
2. Simcity 2000
3. Carmageddon 2
4. Warcraft 2
5. F/A-18 Hornet
6. Civilization
7. Myst
8. Escape Velocity
9. Descent
10. Full Throttle

9: Descent

Macplay, 1996

When *Doom* hit, my PC friends were hopeless. They'd sit in their rooms for hours on end playing the

same levels over and over again. I remember seeing the game for the first time at the mall. It was unlike anything I'd ever seen before. But my utter astonishment at the graphics in *Doom* was matched by the game that gave *Doom* wings: *Descent*.

Years ahead of its time, *Descent* was a powerhouse in every respect. From its stunning fully 3D graphics to its brutal AI (artificial intelligence), *Descent* offered some of the most challenging and rewarding gameplay ever. After only a few seconds, you sincerely forget which way is down as you hurtle through the claustrophobic caverns of a desolate mining colony. *Descent* was the first game to give you free range of motion.

You've been selected to go to a remote mining colony whose robotic mining droids have gone insane (must be running Windows). They've taken all the humans on the planet hostage and hidden them deep inside the planet's core. So, you hop into your hovercraft/spaceship and head into the mouth of the lion.

These robots aren't your typical cute and cuddly droids, though. The development team at Parallax Software put a lot of effort into the enemy AI. They didn't want their bad guys to stand still while you pumped bullets and missiles into them. These automatons are fierce! They dodge your shots and return fire at a blinding pace. As if that isn't bad enough, you also have to try and figure out which way you're going — no small task when you consider the fact that *Descent* has one of the most complicated map systems ever created.

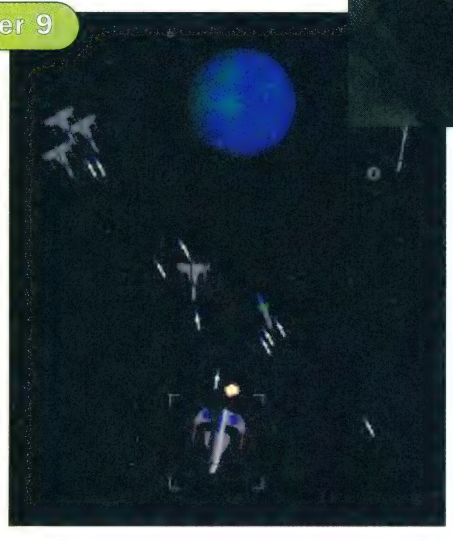
8: Escape Velocity

Ambrosia, 1996

Okay, I know what you're going to say: "Ambrosia? What about *Maelstrom*?" Well, *Maelstrom* definitely helped to put Ambrosia on the map, but it's a rehash of *Asteroids*. In my book, a rehash isn't worth a ranking. And *Escape Velocity* was anything but a rehash.

Riding high on the wave of enthusiasm created by the PC hit *Wing Commander: Privateer*, *Escape Velocity* offered an opportunity that most gamers couldn't pass up: the chance to be the next Han Solo.

Armed with nothing more than a shuttlecraft and 10,000 credits, you start out in a solar system near Earth and head out into the universe to find your fortune. In the beginning you really only have the option of transporting cargo and personnel around the known galaxy for fun and profit, but after a while you scrape together enough money to be one of the big boys. Eventually, you can buy new ships, parts, weapons, and even your own squadron of fighters. You can make a name for yourself in the confederacy or the rebellion, or you can just set out on your own and knock over a few cosmic liquor stores for cash.



Escape Velocity created one of the largest universes ever seen in a game. There are hundreds of planets and thousands of independent traders, pirates, police, and aliens to deal with. The plot twists and turns according to how you behave and whom you befriend. All this from a small company that's never even produced a display box. Not too shabby for shareware, eh?

7: Myst

Cyan, 1993

What can you say about *Myst* that hasn't been said already? *Myst* was the game that legitimized the CD-ROM adventure. While this may have caused more harm than good (*Obsidian*, *Amber*, and *The Martian Chronicles*, oh my!), it started a revolution in video gaming. *Myst* opened the floodgates to mass-market gaming. Before *Myst*, video games were considered the domain of acne-riddled teenage boys with nothing better to do. After *Myst*, however, everything changed. Computer users young and old were sucked into the beautiful islands of *Myst*.

Originally created in Hypercard, *Myst* is a perfect example of a perfect game. Every aspect of the game pulls you further and further into the experience. While the story is interesting and definitely intriguing, what keeps you coming back for more are the beautiful vistas. Items in *Myst* seem more real than the real thing, at times. You can spend hours simply wandering from place to place, hypnotized by the breathtaking scenery.

And oooooh, those puzzles! Some of them are truly evil. The fountain puzzle in particular, which requires you to set eight symbols into sequence, nearly gave me a seizure from sheer frustration. Yet I kept returning to *Myst* for more cranial punishment and retinal pleasure.

6: Civilization

Micropose, 1992

When Sid Meier unleashed *Civilization* onto a weary game world, the aftershocks were felt for the next five years. I've seen grown men scream and cry at being dragged away from a game in progress. Unfortunately, the game wasn't released for the Mac until a year after it

Number 6

available for the Mac, *F/A 18 Hornet* broke new ground for realism. Your Hornet was outfitted with everything its real-life counterpart had. Everything from the HUD (Heads Up Display) to the bombing system was taken right from the real machine.

Number 5

came out on the PC. So, I waited patiently while my PC friends forsook food, sleep, and romance to play a few more turns of *Civ*. When the Mac version of the game finally came, I was in heaven. Not only had Micropose ported (translated from Windows) every portion of the game perfectly, they had completely redone the graphics for the Mac. The result was a game that looked and felt ten times better than the original on the PC.

Civilization was a completely new idea in video games. There was no action, no violence, and no aliens come to take over the world — only you and your people. Starting in 3000 BC, you lead your simple tribe into the modern day. You create cities, build an economy, research new technology (Woo hoo! I've got gunpowder!), and play rough with the competition.

Along the way you deal with unhappy citizens, ineffective government, barbarian uprisings, and even the ultimate race for space. The game progresses in turns, so there are no time constraints placed on the player. An average game can take a few days to complete, and most of the players I knew wouldn't think twice about staying up all night just so they could topple Kazakhstan before dawn.

5: F/A 18 Hornet

Graphic Simulations, 1995

When Graphic Simulations released this game, I spent four hours reading the manual. It was the thickest one I'd ever seen, and the flight model definitely deserved it. Possibly the best flight sim

The actual game itself follows a storyline, of sorts. Your pilot progresses in rank and fame and eventually has to escape from an Iraqi prison and fly home. You fly missions all over poor Iraq, making life for troops on the ground a living hell with your bombs. You even get to drop the big one over Baghdad and watch the mushroom cloud rocket skyward.

The graphics in the game were top notch when it was released, and with the addition of 3Dfx support, they are top notch today as well. There are very few games that can stand the test of time, especially in the turbulent world of flight sims, but *F/A 18 Hornet* has stood up against the best of them. It holds the distinction of being one of only two Mac-only games ported to the PC.

4: Warcraft 2

Blizzard, 1996

"They're destroying our city!" "Whatchu wanme kill?" "Zug-zug!" Ah, the sounds of Orcs marching to war. Few things can stir the hunger for battle the way *Warcraft* can. The original *Warcraft* found its way onto my computer a year before the sequel, and it stayed there right until the last minute. But once I played *Warcraft 2*, I knew the original simply wouldn't do any more.

Warcraft 2 was, is, and always will be a landmark in the real-time strategy genre. When everyone was making *Command and Conque*r rip-offs, Blizzard was working on its own little bundle of joy. *Warcraft 2* took the world by storm. *Command and Conquer* would be reprised in *Red Alert*, a game that would go on to make the top-ten list of most PC game magazines,

But *Warcraft 2* would still hold the upper hand. Its multiplayer support, simple and effective interface, and visual characterizations make it unmistakable. Each unit is animated in incredible detail and has a variety of snappy remarks to unleash upon its commander should he or she click their mouse too much.

On top of all that, *Warcraft 2* introduced a new dimension to the real-time strategy genre: water units. For the first time ever, players could create a navy to fight alongside their formidable land units. And with two nifty flying troops, the air force, army, and navy finally united in a video game.

3: Carmageddon 2

Interplay, 1999

Okay, I know I've beaten the *Carmageddon* thing into the ground, but after six months of intensive study, the game still holds up. I live with three other guys, and two of them are addicted to the game. Every evening whilst I watch the news, I'm guaranteed to be interrupted by one of my compatriots hooting and hollering at the keyboard. I've been forced to watch hundreds of instant replays to see just how much damage and destruction can be wrought on an unsuspecting person or car.

Carmageddon 2 is the only game I've ever seen that can keep a player interested from beginning to end. At first, the utter violence and gore of the game shock and intrigue you. After you get over the initial novelty of running over innocent bystanders, you'll begin to see why the game is so darned much fun.

Driving through the streets of *Carmageddon* actually feels like driving. The physics allow you to pull off pinpoint turns and swing your car around like Mannix. I've seen stunts in

Tom Clancy's RAINBOW SIX™

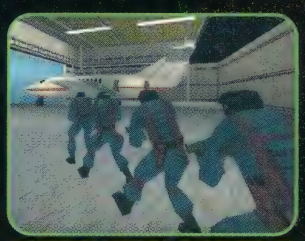
Play as if 6.0 billion lives depended on it.

The most revolutionary action/strategy game of its kind. Nothing else comes close to offering such an exciting combination of strategy, team-building, realistic three-dimensional graphics and true-to-life Special Forces action. The ultimate goal is to save yourself and the world from deadly terrorists. You must successfully complete 17 unique missions. If you die, the game isn't over, ***THE WORLD IS***.

BUILD YOUR TEAM

PLAN THE ATTACK

EXECUTE THE MISSION



SAVE THE WORLD

INCLUDES **MISSION PACK: EAGLE WATCH** THE OFFICIAL ADD-ON

TEEN T CONTENT RATED BY ESRB

Mac

Red Storm ENTERTAINMENT

VARCON SYSTEMS INC.

COMING THIS FALL!

©1998 Red Storm Entertainment, Inc. All rights reserved. Red Storm Entertainment is a trademark of Jack Ryan Enterprises, Ltd. and Larry Bond. Rainbow Six is a trademark of Rubicon, Inc. Published and distributed by MacSoft, a GT Interactive Software Company. Other brand names are trademarks or registered trademarks. Photo ©Steven Galloway, Heckler & Koch.

MacSoft®

A GT Interactive Software Company
www.wizardworks.com/macsoft/

Carmageddon that couldn't even be imagined anywhere else.

Travis, one of my roommates, has managed to take out cars in mid air, while jumping through flaming hoops in the Fair Grounds level. Other times, he's knocked pedestrians into each other at 90 miles per hour. You can actually use pedestrians as projectiles to take out other pedestrians. Plus, each car's entire chassis is fully mapped out and falls apart as it takes damage. You can fly down the street knocking over innocent bystanders with your doors open. It all makes for the best stress relief money can buy.

2: Simcity 2000

Maxis, 1994

Simcity rocked. *Simcity 2000* was even better. *Simcity 2000* took a brilliant idea and gave it a brilliant interface. While the original game had been simple — two residential districts for each commercial and industrial district — *Simcity 2000* added a whole slew of new factors to the mix. It transformed a game into an artist's tool. Cities could now be sculpted out of a hillside or rise up out of the beaches.

With *Simcity 2000*, you could finally make a beautiful metropolis or a bustling suburb, if you so desired. The game was released on the Mac first, and my PC friends drooled onto my shoulder for a full three months before it was finally their turn.

Simcity 2000 added some brilliant ideas to its predicesor. The addition of freeways, subways, a water system, new power plants, and city ordinances were just a few of the things that made the game better than the original. Players could even place signs over areas of their cities in order to show off interesting places to onlookers.

The fervor over *Simcity 2000* reached near-mythic proportions as players raced to build archeologies before anyone else. When Maxis finally released the cheat codes (just type "porntipsguzzardo"), cities began to hit the sky. With an unlimited supply of money and time, anyone can create the ivory towers of their dreams in the city of bliss.

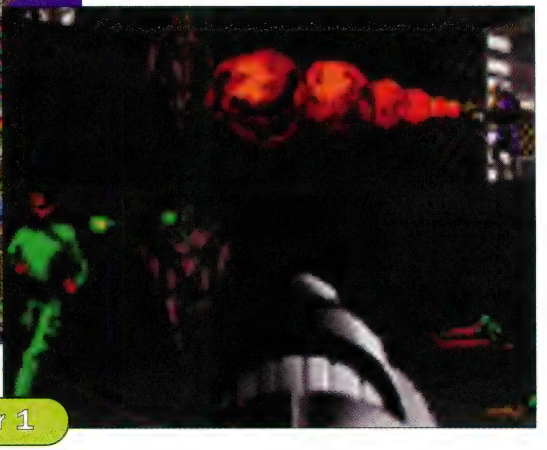
Number 3

1: Marathon

Bungie, 1995

When I first got my hands on this game, I didn't do anything else for a week and a half. The single-player game was more engrossing than a good episode of *All My Children*, and it had more drama too. Stranded in space and attacked by aliens called Phfor, it's your job to play Rambo and save all of the innocent "Bobs" from peril. Of course, you have to use a whole arsenal of weapons to do it. And what glorious weapons they are: flame throwers, machine guns, grenade launchers, and the almighty "Spanker" missile launcher.

Number 2



Number 1

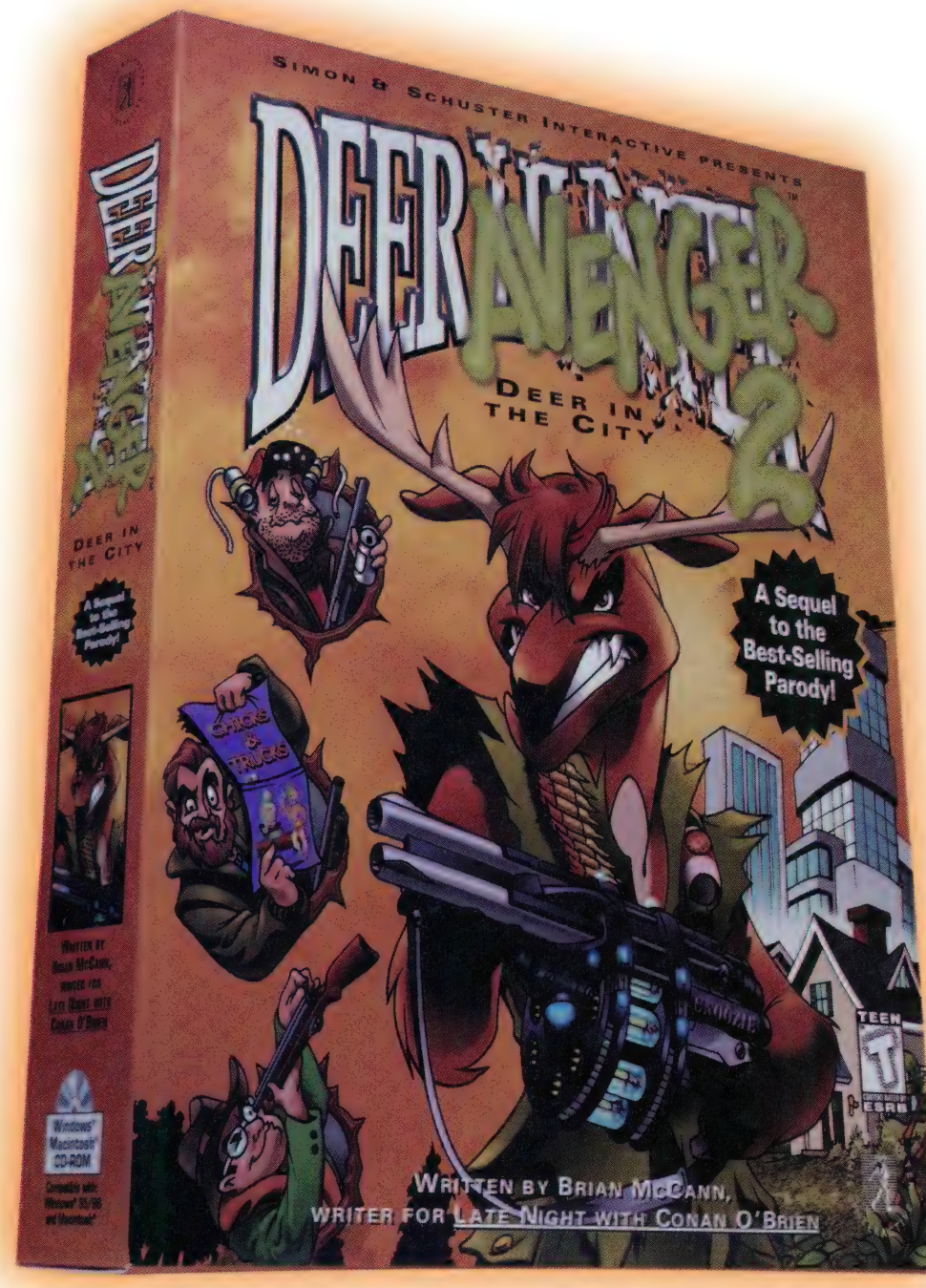
But what really set *Marathon* apart was the network play. *Marathon 2* really came into its own in this respect, but the original still holds a warm place in the heart of anyone who played it. No one had ever seen a networked first-person game before — at least, no one had ever had the guts to try and network *Doom* (an act of near futility). My friend Cory had a big, burly PowerPC 6100, and I lugged my LC III, monitor and all, over to his place to play a network game for the first time ever. I think we were up until around 3 a.m. every night for four days. It was a holy experience for me. It got to the point where we would stand at opposite ends of a hallway armed with Spankers waiting for each other to step into view. It was more fun for us to sit motionless in *Marathon* together than to play every level of *Doom* by ourselves. And that, my friends, it what makes a great game.

The Winner, and Still Champion!

Well, there you have it, the ultimate and authoritative (read mine) top ten. I know you've got qualms with some of these choices — maybe with all of them. There are a lot of games that just missed the cut, such as *Bolo* (the ultimate networked tank game), *Dark Castle* (the forefather of *Prince of Persia*), and *Prince of Persia* (the first realistic side-scrolling adventure). But there are, after all, only ten slots to fill.

Let me know what you think. Be sure to include your own top ten. We'll be putting the readers' top ten in a forthcoming issue. Send your lists to **alex@machome.com.** And please be polite — I don't like being yelled at either.

BAMBO IS BACK!



Here's the wildest first-person shooter ever. Your role is that of Bambo, the biggest bad-ass buck in the woods. You're in town for one purpose–to take out the trash. Use a REM-16, a DREAM WEAVER or SNOOZIE 5000; the choice of tranquilizer rifles is yours. Some might call it a sleeper–hunters will call it their worst nightmare.

Deer Avenger 2

Look for it in your Mac section or wherever hunting games are sold.

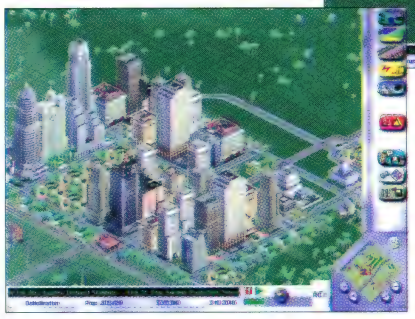
SIMON & SCHUSTER INTERACTIVE

©1999 Simon & Schuster Interactive. All Rights Reserved.

Simcity 3000

$49, Maxis
www.maxis.com

Simcity 2000 was an evil game. Its sole purpose was to keep me from exiting my computer room for days at a time. I lost entire weeks to *Simcity 2000*. So, naturally, when I popped into the office on my day off and found a package from Maxis lying on my desk, I broke out in a cold sweat. "Great," I thought, "I'm not going to be able to leave without playing this." Not only was I not able to leave without playing *Simcity 3000*, I was not able to leave at all. I stayed until 7 p.m. that night, at which time I put my city on a floppy disk (I don't have a blue-and-white yet) and took it home so I could work on it until well past midnight. Simply put, *Simcity 3000* will grab you by the neck and hold you transfixed for months to come.



Evolution

For those of you new to the *Simcity* world, welcome to one of the most original, rewarding, and addictive universes in the gaming community. You are the newly elected mayor of a city, and it's your job to build a bustling metropolis. To do this, you must build roads, power plants, water pumps, landfills, police stations, schools, hospitals, train stations, bus stops, and of course, zone for residential, commercial, and industrial sectors. In the original *Simcity*, this was the end of the story. Yes, it was fun to watch your city grow and nurture it up to New York size, but the game lacked the more-advanced options needed to tweak a city's performance. In *Simcity 2000*, the population models became more complex as your citizens (called Sims) began to get more involved in their city. However, while *Simcity 2000* was a huge leap forward, your cities never looked as good as the real thing.

Now, however, Maxis has a nearly perfect product on its hands. *Simcity 3000* allows you to build gorgeous cities that actually look and act like the real thing. Your citizens can travel longer distances to get to work or go shopping, so you can spread out your cities in a more lifelike urban sprawl. It's much easier to build a utopian small-town USA this time around, too. The game rewards you for the aesthetic value of your city. While a single park can help raise property values slightly, a vast sprawling Central Park can send land values through the roof. Naturally, this makes for some beautiful landscaping.

Find Yourself a City

Visually, *Simcity* gives an excellent approximation of a modern-day city. Indeed, one could consider the game to be an art program. You can place landmark buildings, such as the World Trade Center or the Old North Church, to add to your city's beauty. These buildings are free, but you can only have four landmarks in any given city. Another new addition is the ability to make certain buildings historic. This ensures that your favorite Creamy Filling Consortium factory will never turn into a drab Amalgamated Amalgamation. And yes, all the buildings have names like this. It's all part of that trademark Maxis humor.

Maxis inserts this humor into the newly added news ticker. Vital info is displayed along the bottom of your screen in a flowing stream of text. Choice headlines include, "Bobville students not the sharpest knives in the drawer," (which means you need to build more schools) and "Tree stuck in cat, firefighters baffled." Also included to help manage your city is a long line of advisors. While they do give erroneous and misleading information at times, for the most part they're rather good at identifying problems within your city.

Call an Exterminator

No city can exist without a few problems, and, alas, *Simcity 3000* is no different. The interface is not Mac standard and causes some confusion at first. If you don't have a high-end machine, this will cause some major headaches while you spend a lot of time trying to line up the cursor to correctly place items on the map. Memory is another thorn in *Simcity*'s side. While the game requires 64MB of free RAM, it refuses to use virtual memory. If you do not have 64MB of free RAM, you need to lower the preferred memory size under Get Info in the Finder. If you don't, the game will simply refuse to run. However, running without 64MB can cause crashes, so be forewarned.

If you buy one game this year, it should be *Simcity 3000*. (Of course, if you buy only one game this year, I'm not doing my job!) *Simcity 3000* allows you to set your own goals and create your own masterpiece. Everything about this game confirms that *Simcity* is the Dom Perignon of video games.

—Alex Handy

The Ultimate Game for the Ultimate System!

HEROES III

OF MIGHT AND MAGIC™

THE RESTORATION OF ERATHIA

EPIC BATTLES OF STRATEGY AND HONOR

The best is now better. Swords and sorcery, ancient magic, shrewd strategy, mass combat and fierce fighting. It's all coming to the Mac®.

- **Beautiful Graphics - high resolution 3D rendered graphics and environments**
- **Huge fantasy world to explore - 6 massive campaigns and over 40 single scenario maps**
- **Discover 8 new town types and control over 118 combat units**
- **Easy to use interface to get you gaming within minutes**

EVERYONE E CONTENT RATED BY ESRB

NEW WORLD COMPUTING® 3DO™

www.mightandmagic.com

©1999 The 3DO Company. All Rights Reserved. 3DO, Heroes of Might and Magic, New World Computing, and their respective logos are trademarks and/or service marks of The 3DO Company in the U.S. and other countries. New World Computing is a division of The 3DO Company. Mac and the Mac logo are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. All other trademarks belong to their respective owners.

Mac

Total Annihilation

$49, MacSoft
800-229-2714
www.wizworks.com/mac

Total Annihilation blows all other real-time strategy games out of the water. No, scratch that; *Total Annihilation* pulls the competition into a stormy sea and then blows them out of the water. There's a little bit here from every other real-time strategy game on the market. It's everything a real-time strategy game should be.

The game focuses on an ancient conflict between the Arm and the Core, two highly advanced sectors of a single race. When science allowed for the transfer of the mind into machines, a civil war broke out between machine lovers and flesh lovers. Aside from that, the conflict is mainly about military supremacy — not who's right and who's wrong. The war has been going on for thousands of years, and neither side has had an upper hand.

The interface is your standard real-time strategy fare: build a base; gather metal and energy; and build tanks, planes, buildings, turrets, boats, and all manner of destructive robots. None of this is new, but *Total Annihilation* isn't about new ideas; it's about fixing old ones. For starters, there is no limit on your metal and energy supplies.

While there may only be a few ore deposits near your base, you can mine metal from them as long as you can defend your metal extractors from the enemy. Also, there are no restrictions on how many units you can select at once. This makes defending much easier, as you don't have to keep your troops in tight formation for them to remain effective.

Total Annihilation isn't about tactics as much as it's about strategy: You'll spend more time plotting your next sneaky attack than deciding which units will be at the front of your offensive strike.

While the gameplay is great and the multiplayer support is top notch (Game Ranger helps a lot), there are still a few bugs that need to be squashed. While none of these is a show breaker, the game isn't perfect. But if you don't mind putting up with a few anomalies, you'll find a rewarding game that is able to satisfy without a drop of blood or gore. This is a real winner the whole family can enjoy.

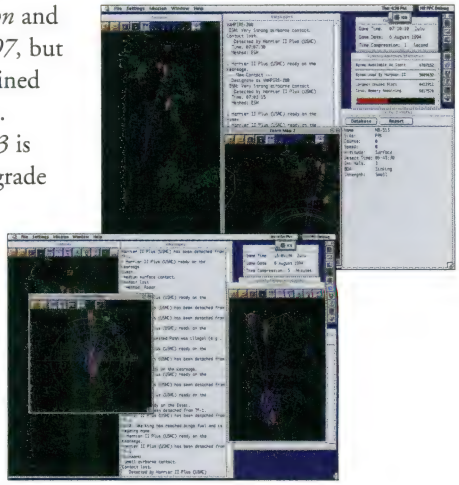
—Alex Handy

Harpoon 3 (v3.0.5)

$35, Advanced Gaming Systems
Order online
www.harpoon3.com

What's that you say? A war game without booming guns, fiery explosions, rapid 3D movement, and all the bells and whistles of modern computer gaming? Who the heck would buy a game like that? Lots of people.

Harpoon 3 is real-time modern naval warfare with a serious pedigree. The original *Harpoon*, developed way back in 1989 (dinosaur time when speaking of computers), became a cult classic, with players developing and trading new battle sets. It went through a number of updates and continued to sell well until 1994, when *Harpoon 2* was developed. Then came *Harpoon 2 Deluxe Multimedia Edition* and *Harpoon Classic '97*, but the play has remained basically the same. Indeed, *Harpoon 3* is considered an upgrade rather than a new game.



The reasons for its popularity are simple. There's a lot of complex warfare packed in this CD — enough to keep a dedicated gamer happy for months. Games are delivered in real time, which means a simple engagement can take the better part of a day. If you aren't that patient, there's a time-compression element that allows you to accelerate your time to a speed you prefer.

Forget the eye candy. This is no *Fleet Command* or *Fighting Steel*, with 3D graphics and flashy pyrotechnics. Think of yourself as a battle commander in a darkened war room, far below deck, overseeing movement on the situation board (but with multiple windows). Blips move at a seagoing-snail's pace. Enemy elements appear and plot courses toward you. You'll use toolbar buttons to activate radar, deploy forces, and bring weapons to bear. And yes, battles will rage, but you won't see them or hear them. You'll just see a light blink out on the board and realize that you've lost another ship.

Realistic? Sure. But it's an acquired taste, with a steep learning curve. Longtime *Harpoon* addicts and serious war gamers will drool with delight. Newcomers will spend a ton of time scratching their heads in frustration, wondering what to do next.

—John Lee

Cythera

$25, Ambrosia Software
www.ambrosiasw.com

Anyone who's followed gaming from the PC side knows about the *Ultima* series. *Ultima* has seen over nine installments on the PC, with another coming, and an online multiplayer world as well. With *Cythera*, Ambrosia ventures back into familiar territory: copying a PC game that's never coming to the Mac. The last time they did this, they created *Escape Velocity* (a rip-off of *Wing Commander Privateer*, arguably one of the best games ever), a game awarded high honors elsewhere in this magazine (pg. 65). Ever since *Ultima* 7, 7 1/2, and 8 were released, Mac fans have been missing out on one of the best role-playing games ever.

The basis of *Cythera* is not unlike most other RPGs (role playing games): You are sucked into a fantasy world in which you are the prophesied savior who must cure the king, save the town, and generally defeat evil. There's nothing terribly new in either the world or the characters in it, but the story is solid and there's very little aimless wandering.

The interface is what makes this game, however. You can explore thousands of locations, and everything is interactive. You can search through homes and steal people's shoes! If that's not realism, I don't know what is. While controlling your herd of fighters and wizards may be a tad overwhelming at first, it's the only way to get every control you need into such a limited interface (read one-button mouse). But what *Cythera* loses in learning curve, it makes up for in rewarding gameplay.

You won't soon get lost or find yourself with nothing to explore in this world. There are enough places to explore and people to abuse as in any commercial game. In some cases, as is usually the case with Ambrosia, there are little touches of humor and details that simply wouldn't make it past a corporate committee. This is what makes Ambrosia such a wonderful company; it doesn't have to compromise its creativity simply because a game's graphics aren't up to date. Indeed, *Cythera's* graphics aren't flashy, but you can play the game reliably on almost any Mac you can think of — a feat not many games can claim these days.

—Alex Handy

On this month's CD

november 1999

Application Demos
Adobe ImageReady
Adobe ImageStyler
Conflict Catcher 8.0
Dreamweaver 2
Extensis Suitcase 8
Fireworks 2
Great Photo!
Install Reunion 6
Macromedia Flash 4
Norton AntiVirus 5.0
QuicKeys 4.0
Timbuktu Pro
TypeStyler 3

Edutainment Demos
Blue's ABC Activites
Freddi Fish 4
The Gungan Frontier
Putt Putt Enters The Race

Game Demos
Age of Empires
Air Hockey
Battle for the Universe
Bugdom
Burning Monkey Solitaire 2
Caesar III
Deathground
Harpoon 3
Lost Souls
Deer Avenger 2
Jazz Jackrabbit 2
Tanaka
Tomb Raider Gold
Traitors Gate
Virtual Wings

Internet Essentials
Eudora Pro
Outlook Express 4.5
QuickMail Pro 2.0
Internet Explorer
Netscape Communicator
Fetch 3.0.3
InstallAIM2.5.720
RealPlayer
Shockwave 7.02
YA-Newswatcher 4.2.2

Shareware Utilities
8Tuner 3.5.1
A Better Finder
ABFSelect_1_7
ACTION GoMac 2.0.2
Agax1.2
Aladdin DropStuff 5.1.2
Aladdin Expander 5.1.3
AutoDelete
BeHierarchic4.0
BugScan 1.2.3
Burn 2.5
Control Commander
DragPeek 1.0
DragStrip® 3.7
DropIcon 2.0
DropImage 1.5
Extension Overload v3.3
File Buddy 5.2
Font Gander Pro 1.6
FontBuddy 1.2
GraphicConverter 3.6 US
iMacolor 1.0
iView Multimedia 3.6
MacOS Items Manager 1.0
MPecker Drop Decoder 1.6.2
MPecker Encoder 1.0
Office 98-FileMaker Pro
Pict-2-Icon PPC
Pretty Scroll 2.0
Reader
Secret 1.1
Sherlock Menu 2.1
SimpleLauncher3.5.2e_PPC
Snapz Pro 2.01
SoundApp Fat
SuperLock4Lite
The Incredible Elk
TitleTrack 2.0
TypeIt4Me 4.8.1
USB Overdrive 1.0

Updaters
Adobe Premiere 5.1a
AppleWorks 5.0.3
Conflict Catcher 8.0.3
Connectix VGS 1.2
Dark Vengeance 1.2
Eudora Pro 4.2
Fireworks 2.0.2
GV PC Card 56K 2.2
IE 4.5 Plug-in
Illustrator 8.0.1
IomegaWare 1.1.3
MouseWare USB
Myth 1.3
Office 98 8.5
QuickCam 2.1.3
REALBasic 2.0.2
TelePort 2.6.8
Teleport for Keyspan
Tomb Raider II
Umax VistaScan 3.5.1
Unimouse Overdrive
Unreal UMOD
Unreal
USB SuperDisk 2.0
VPC 2.1.3

READER'S CHOICE

The Sixth Annual MHJ

Vote for your favorite Mac products!

You know what *we* think are the best Mac products, but enough of our yakkin'. Now, we want to know your opinion. Visit the MacHome Website and vote on your favorite Mac hardware and software. The Mac community values your opinions. Alright, you need further incentive? How about this then — we will choose 8 winners at random to win one of the following fabulous prizes: Corel Draw 8, Virtual PC 2.0, or Kensington's Orbit Mouse or Trackball. **Good luck, and cast your vote today!**

Cast Your Vote!

To make it as easy as possible, we've set up our Website to take your votes. Just go to

www.machome.com/vote.html

and fill out the easy form. You can pick any Mac products you want.

Entries are due by midnight, November 15, 1999

One entry per person — we know who you are. Winners will be chosen randomly from all completed entries. Responses are confidential, and your name is used only for contest drawing eligibility. Prize winners will be notified by phone and mail by December 15, 1999. Prize winners will be announced in the February 2000 issue of MacHome. Employees of *MacHome* are not elegible to enter. If you do not have Internet access, you may send a S.A.S.E. to *MacHome*, 703 Market St., Suite 535, San Francisco, CA 94103 for a ballot.

By Chris McVeigh

Building Your Office, Part I

Creating a comfortable environment for you and your Macintosh

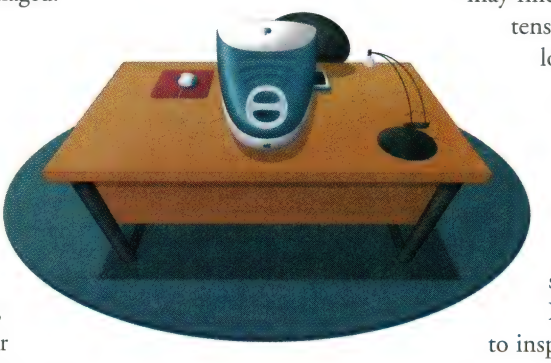
Bringing home a new Macintosh is a bit like bringing home a new baby. You've got to ready a room for the little tyke and fill it with the hundred-and-one things you suddenly just have to have. This month we take a look at the two most important items you'll need: a desk and a chair.

The Desk

As a rule, you should avoid cheap all-in-one desks that offer a cute hutch, built-in printer stand, and perhaps even an integrated CD rack. Although these desks look great in catalogs and store flyers, they are often very small and poorly constructed. Instead, look for a desk with a large flat surface — one that's deep enough to accommodate your iMac or Apple Studio display and still provide ample room for your keyboard and mouse. You may also have additional devices to connect to your Mac, such as a scanner or printer. These items should be placed within arm's reach of your Mac — and so the more surface area you have, the better.

You must also be somewhat health conscious when searching for a desk. The industrial design of the iMac does not encourage proper posture. Due to the low profile of the system, most users will find themselves tilting their heads down to stare at the display, or raising their hands up to reach the keyboard. Over time, this can cause muscular discomfort. It's thus very important that your display is at a comfortable eye level. You should also make sure that your upper arm and forearm are at a right angle as you type, with your wrists and hands extended in a straight line. There are two ways to achieve this.

The first is to purchase a desk with a lowered keyboard platform and slightly raised desk surface. Avoid keyboard drawers — they tend to be unstable and are easily damaged. The second is to raise your display's height. Some desks have optional stands that raise the display approximately six inches. (Conveniently, you can store your keyboard under the stand when it's not in use.)



Finally, you may want to avoid a desk with drawers, as it severely limits your lateral scootability. I'll often work at my Power Macintosh for awhile and then scoot my chair to the left to read or write something on the desk — a task that is virtually impossible when bounded by drawers on either side.

The Chair

Choosing a chair that is right for you can be a difficult task. You may first lean toward buying a soft, comfy chair with a high back. Unfortunately, such chairs are better suited for leisurely reading than working at a computer. Most people have a tendency to slump in their chairs, and this creates back strain. It's thus very important to choose a sturdy chair with solid lower-back support. After all, you'll be sitting upright for hours at a time.

Select a chair with an adjustable back that curves to support your spine. It's okay to choose a chair that tilts when you lean backwards, but make sure you can adjust the tension. If the chair tilts backwards too easily, you may find yourself tensing your lower back in order to bring the chair forward again, causing additional strain.

It's important to inspect the rollers of the chair you buy.

Some inexpensive chairs come with very poor-quality plastic rollers that collapse on themselves after a short time. Cast iron rollers are always the best choice, but rugged plastic rollers are a good alternative — just be sure to give the chair a test drive in the show room before you take it home.

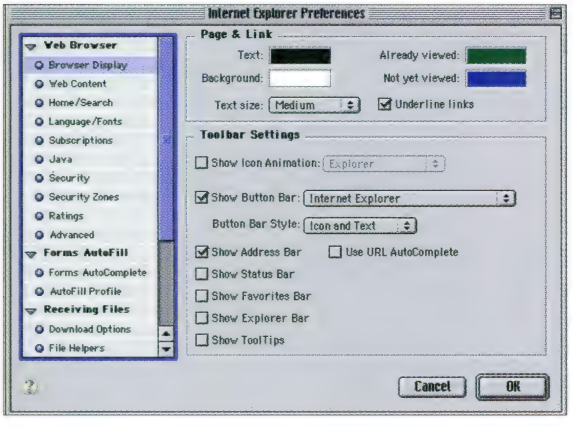
Baby Steps

Choosing a desk and chair is the first step in creating a comfortable environment for you and your Macintosh. Next month we'll look at other must-have items and discuss maximizing office space. MH

Unclutter Your Browser

Both Netscape Communicator and Internet Explorer weigh down their browser windows with a graphical navigation toolbar, an address toolbar, and a favorites toolbar. Although the toolbars are certainly useful, they aren't always necessary. And if you have a smaller display — one capable of only 640 x 480 or 800 x 600 resolutions — the toolbars simply steal precious space from the content.

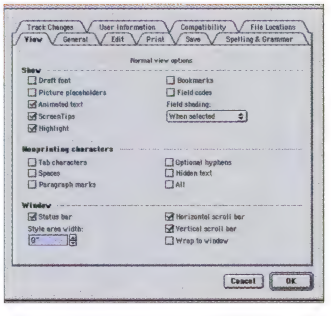
Thankfully, you can minimize the toolbars in both browsers. In Netscape Communicator, all three bars can be collapsed by clicking on the tiny blue triangle at the left. In Internet Explorer, you'll need to select Preferences from the Edit menu and click on Browser Display in the window that appears. At the right, you'll see a box titled Toolbar Settings. Simply unclick the toolbars you want to eliminate, and click OK. It's probably a good idea to leave the address toolbar active so that you can quickly type in your Internet addresses.



On the other hand, the navigational toolbar becomes obsolete once you learn a few keyboard commands. In both Communicator and Explorer, you can browse backwards and forwards by pressing Command-Right Arrow on your keyboard and Command-Left Arrow on your keyboard. You can also reload a page by pressing Command-R, and stop a page from loading by pressing Command-Period. With practice, a few taps of the keyboard will be quicker than a click of the mouse!

Banishing Word's Status Bar

Microsoft Word 98 includes a status bar that runs the width of the screen at the bottom of the application, providing such information as page, section, and paragraph number. For most people, it's a useless nuisance that obscures items behind it, annoyingly popping in and out of view as they toggle through applications. Thankfully, it's easy to turn off. Simply select Preferences from the Tools menu and click on the Views tab in the window that appears. At the bottom, immediately below the Windows header, you'll see the Status bar option. Deselect the checkbox and click OK to forever rid yourself of the nuisance. If you really want it back, just click the box and it will return.



Quickly Locate Recent Files

Some tasks you tackle with your Macintosh may require you to store multiple items with similar names in the same folder. It's a situation I frequently run into when creating graphics for Websites (for example: border.gif, border2.gif, border3.gif, etc.). If you view your folders as icons, there's no quick way to tell which graphic was created most recently. The solution is to view the folder as a list (select List from the Finder's View menu). This allows you to see the last-modified date and the size of the document. Still, it's a chore to scan through the files and determine which document was created most recently. Thankfully, the Mac OS can help us out with that. At the top of the folder window, you'll see Name, Date Modified, Size, and Kind. These are actually buttons you can click to sort your files differently. Click on the Date Modified button to view the folder's contents by date. The most recently modified file will be listed at the top — and be very easy to find.

share your tips!

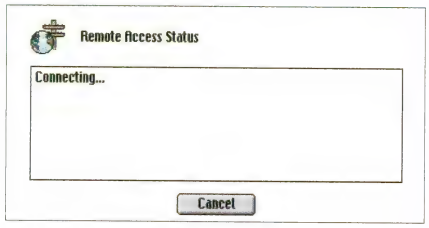
Got some tips you'd like to share with your fellow *MacHome* readers? Please send them to:

chris @ machome.com

All mail is assumed intended for publication, and we reserve the right to edit tips for brevity and clarity. When sending your tips, please make sure to include your full name.

No Waiting for the Internet

One of the subtle annoyances of the current Mac OS is the way the Remote Access Status box appears when you launch an application that initiates a connection to the Internet. The connection procedure takes front and center stage, prohibiting you from doing anything else, such as writing an e-mail message or working in another application. You must sit and wait while the connection is established. It doesn't have to be this way. The Mac OS can make the connection to the Internet in the background, without locking you out of the rest of your computer. The key is preemptive action.



Instead of launching Internet Explorer and sitting through the connection procedure, simply click on the Remote Access module in the Control Strip and select Connect from the bottom of the listed options. The Mac OS will make the connection behind the scenes, allowing you to continue your work. Keep an eye on the Remote Access module — while the connection is being made, a line will flash below the icon. Once it stops flashing and remains visible, the connection has been established. Now you can go ahead and launch your browser without fear, as you'll have immediate access the Internet without having to sit through the connection procedure.

Mac OS Runtime for Java 2.1.4

This latest update to Apple's Java engine fixes a bug that caused windows to become nonfunctional and/or disappear and another bug that occasionally caused multiple applications to quit when a Java application was shut down. The update can be found at *http://asu.info.apple.com/swupdates.nsf/artnum/n11304.*

DVD on the Desktop

Apple's DVD software has a cool undocumented feature that allows you to play DVD content as a desktop background. If you have a DVD-equipped PowerBook or Power Macintosh G3, insert a DVD into your drive, launch the Apple DVD Player, and press the space bar to begin playing the movie. Select Present on Screen from the Video menu, and then press Command-3 on the keyboard to maximize the viewing area. You'll also want to hide your Control Strip and drag the mouse into the bottom right corner. Once that's done, take a screen shot by pressing Command-Option-3. A file called Picture 1 will appear in your hard drive window. Rename the file DVD Background (or something equally descriptive), and put the file in a safe place. Next, you'll need to open the Appearance control panel. Click on the desktop tab and then drag your DVD Background onto the mini-desktop at the left to set it as the background image. Close the Appearance control panel and then switch back to the DVD Player. Again, make sure to select Present on Screen from the Video menu, and then press Command-3 to maximize the viewing area. Finally, hold down the Option key and select Finder from Application menu. This will "hide" the DVD player, allowing the video to play through to the background, beneath your icons and windows.

REALbasic 2.0

The visual, object-oriented BASIC development environment for Macintosh®

Our award-winning application is the most advanced BASIC development tool available for the Macintosh. It's easy enough for beginners and powerful enough for developers to use. Whether you want to learn (or return!) to programming, REALbasic is for you!

With REALbasic you can build anything from a small utility to a large application or the next great game, faster and easier than ever before.

Download a FREE trial version **NOW!**
www.realbasic.com or call
512.263.1233 for more information.

REALbasic™

REALbasic is a trademark of REAL Software, Inc.

back to basics [You Ask, We Answer]

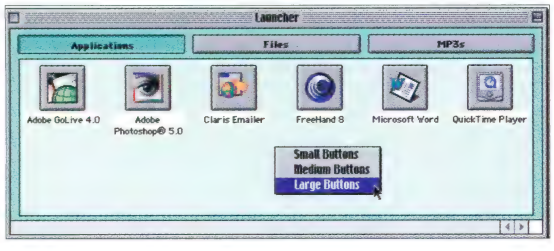
By Chris McVeigh

Using the Launcher, Sending Attachments, Icon Jamboree

Q For the life of me, I can't remember how to change the size of the Launcher buttons or where to find the information. I am using Mac OS 8.6. Can you help me?

Kent M. Sprague

A The Launcher offers few user controls and the documentation included with the Mac OS is very vague. After some research, I've discovered that you can change the size of Launcher icons by holding down the Command key and clicking in the Launcher window. A small menu will appear, giving you three size options. Simply select the size you want and release the mouse button.

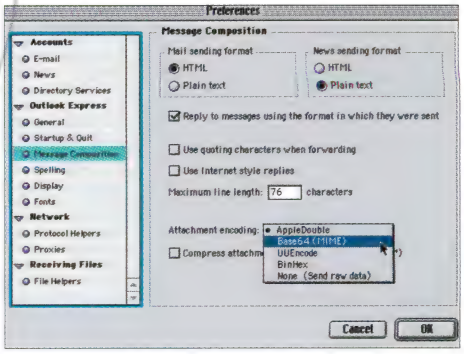


Items are added to the Launcher by dragging and dropping icons into the Launcher window. That can fill up the Laucher rather quickly, however. The good news is that you can add different pages to the Launcher to help organize your items. Open your System Folder, locate the "Launcher Items" folder, and open it. Once inside, press Command-N to create a new folder. You can rename the folder anything you like, but it must begin with a bullet (created by pressing Option-8 on the keyboard). Open the Launcher and you'll see that there are now two buttons at the top of the window — one named "Application" and one bearing the same name as the folder you just created. Clicking on the buttons will switch between pages, and you can now drag and drop applications and files to the pages of your choice. Additional pages can be created by adding new folders in the Launcher Items folder. Please note that you'll need to quit and relaunch the Launcher in order to see the new buttons.

Q I have an iMac and I use Outlook Express as my e-mail client. I scan pictures and attach the images to my e-mail messages, but all too often the receiver can't view the attachment. I save the files in the JPEG format, which I can receive and view properly myself. Outlook Express gives me a message saying my attachment is being encoded when I click "send." What can I do so that my friends and coworkers can see the images? Most people I send the files to are using Windows-based computers.

Rosemary Boyle

A Files sent over the Internet are frequently encoded in an effort to adhere to the lowest common denominator: ASCII text. Although this helps ensure proper transmission, it can also lead to headaches due to different methods of encoding. Outlook Express uses the Macintosh standard "AppleDouble" encoder by default. Unfortunately, some Windows e-mail applications don't support this encoding method. All



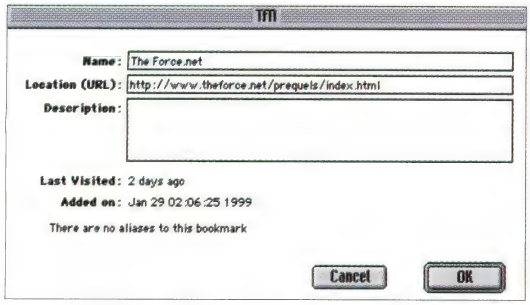
AppleDouble-encoded files received by such an application will arrive as unrecognizable, garbled text.

The solution to the problem is to change the encoder used by Outlook Express. Select "Preferences" from the "Edit" menu. The window that appears will list several options at the left. Select "Message Composition." In the box at the right, you'll see the words "Attachment Encoding" and a pop-up menu next to it. Select either "Base 64 (MIME)" or "Unencode" from the menu, and click "Okay." Now re-send your friend the image file. Make sure the file is formatted with the proper PC suffix — in this case, "imagename.jpg." These suffixes are important to help Windows identify the type of file it is working with.

Q I was just cleaning up my Bookmarks file in Netscape Communicator and I found some names I didn't recognize. They turned out to be sites that I wanted to keep, but the names that are listed are not at all related to the sites. Is there a way to edit the names in the bookmarks listing?

Andy Graham

A You can edit your Bookmarks' names by first selecting "Edit Bookmarks" from Communicator's "Bookmarks" menu. Once the Bookmarks window appears, hold down the Option key and click on the link you want to modify. A small window will appear, allowing you



to change the name and location of the link. Simply enter a new name, and click "Okay." This automatically changes the link's name in the Bookmarks menu.

Q There's a multitude of icons left on my desktop after I have downloaded files from the Internet. For example, I currently have MacDirectory.bin. src.hqx, encyclopedia.src.hqx, and Mac OS 8.6 Update.smi.bin cluttering up my desktop. What am I supposed to do with them? Do I put them into the System folder, or somewhere else? I have never seen any printed material explaining what to do with such items.

David K. Robinson

A Netscape Navigator and Internet Explorer toss all downloaded files onto your desktop, unless you specify a different destination. The files you download are encoded and compressed for easier transmission over the Internet. Once the file arrives, Stuffit Expander decodes and decompresses it.

Unfortunately, it usually leaves the original downloaded file just sitting there — and in some cases, it creates a third, interim file as it decompresses. These files are recognizable by their suffixes (.bin, .hqx, and .sit) and are useless once the file has been expanded. Locate the uncompressed version of the file, and toss the others in the trash.

A little preemptive action goes a long way. Stuffit Expander can automatically delete these files once it has finished expanding them. Launch Stuffit Expander (use Sherlock or Find File to locate Stuffit Expander if you cannot find it yourself.) and select "Preferences" from the "File" menu. In the window that appears, you'll notice several options listed at the right. The second item listed is "Expand Archives." Below it you'll see an unchecked option to "Delete after expanding." Check this item and click "Okay" at the base of the window. Expander will now delete the unneeded files once they've been expanded.

Q I have a Power Mac G3 with Mac OS 8.1. Once, I recall having six items listed in the Finder's "Special" menu. Now I only have three! How do I get the lost items back?

John F. Adcock

A Someone's messing with your Finder preferences! But it's easy to fix. Select "Preferences" from the Finder's "Edit" menu, and click on the "General" tab in the Window that appears. You want "Simple Finder," which streamlines the Finder menus, providing only essential features and commands. This prevents troublemakers from messing with your files or emptying your trash (files can still be moved, however). Simply uncheck the option and close the window to regain your full Finder menus. MM

let us know!

Got a Mac problem that's driving you nuts? Let us take a crack at it. We'll answer questions of general interest to all readers. All mail is assumed intended for publication, and we reserve the right to edit questions for brevity and clarity. When sending your questions, include your full name and phone number. Send your questions to:

questions @ machome.com

By Chris McVeigh

The Internet

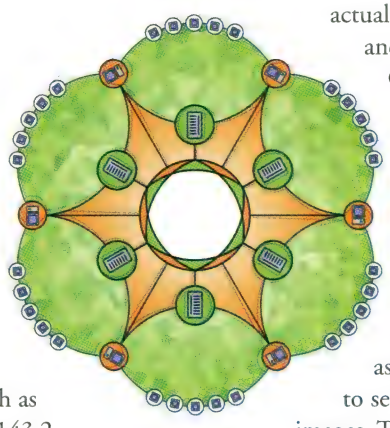
Understanding the Tangled Web

A common misconception is that the Internet is a single massive computer sitting in a building somewhere in the United States. It's a belief that couldn't be farther from the truth. The Internet, in fact, is a collection of millions of computers connected together through a series of vast networks — like a web — that span the globe.

The Internet is much older than you might think, too. It was created in 1969 by the U.S. government's Advanced Research Projects Agency (ARPA) to allow research computers at one college to communicate with research computers at other colleges. ARPANet, as it was originally known, connected each computer to its neighboring computers with separate land lines, creating multiple data paths to any one computer. This built-in redundancy let the network operate even if parts of it were destroyed in a natural disaster or military attack.

The best analogy for the modern Internet is a city. In the city you have homes, businesses, entertainment complexes, schools, churches, and nonprofit organizations. You can travel to any building using any series of streets that lead to its front door. Usually, though, you simply find your way to a local highway and follow it around the city until you near your destination. Then, you turn off and navigate the streets until you arrive at the building.

The Internet functions very similarly. Your computer is connected to an Internet Service Provider (ISP) via a modem, allowing you to leave your home. The ISP provides a street between your computer and the Internet's highway — a fiber-optic "backbone" that shuttles information at the speed of light.



Each computer connected to the Internet is assigned an Internet Protocol (IP) address — a four-part compound number such as *machome.com*'s 157.22.143.2 address. An IP address is essentially a digital phone number, complete with "area code," that allows any computer connected to the Internet to communicate with any other computer on the Internet.

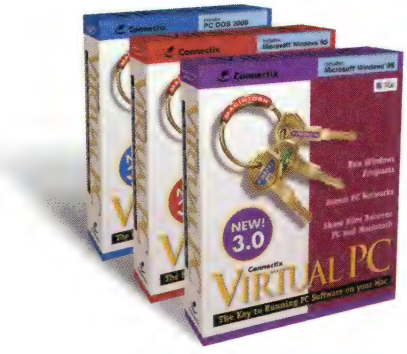
Since numeric IP addresses are not descriptive or memorable, they are frequently given an alphanumeric alias, or "domain name." It's much easier to remember *www.machome.com* than it is to recall 157.22.143.2.

Although many of us use e-mail and instant messaging daily, the most popular function of the Internet remains the public presentation of information through Web pages. These are built using HTML, or hypertext markup language. Hypertext describes the layout of the page, including text style, column location, and graphics placement.

Say you'd like to visit *MacHome*'s online site. Launch your Internet browser and type *http://www.machome.com*. Your browser then transmits the alphanumeric address to a computer called a domain name server, which notes that *www.machome.com* is actually server 157.22.143.2 and requests information. Once *MacHome*'s server has received the request, it sends HTML code to your computer, describing the *MacHome* home page. After the textual code has been received, your browser asks the *MacHome* server to send the site's graphic images. The information is shuttled from *MacHome*'s server, to *MacHome*'s ISP, to a fiber-optic backbone in San Francisco, and then across the nation to your ISP, through a telephone line to your modem, and then to your computer screen. If you click on an underlined link to visit another page, the process is repeated.

The Internet has become a digital circulatory system shuttling trillions of bits of information around the world each day. A friend once remarked, "The Internet is made up of so many different computers, so many different networks, and so many different pieces of software, it's nothing short of amazing that it works at all — let alone as well as it does." Indeed.

Windows® compatible



Without a doubt, Macs, including the new iBooks, are the best personal computers on the market today. However, compatibility and interoperability between the Mac and the Windows platforms are critical in today's world. Virtual PC is a software solution that brings Windows capabilities right to your Mac! Run Windows-based business, home and education programs. Access PC networks. Easily share files between your Mac and PC desktops. All on one computer, your Mac!

Virtual PC is available in three versions: with PC-DOS, Windows 95 or 98 pre-installed. You can also run Windows NT or Linux. Get two computers in one, and get it today! To buy or for more information, go to www.connectix.com, or call 1.800.395.1814.

Connectix

© Copyright Connectix Corporation. Connectix and Connectix Virtual PC are trademarks of Connectix Corporation. All other trademarks are property of their respective holders.

Macworld EXPO

www.macworldexpo.com

THE ULTIMATE MACINTOSH EXPERIENCE

january 4-8, 2000

san francisco
moscone convention center
marriott hotel

MACWORLD EXPO/SAN FRANCISCO 2000 It's undeniable. The platform is **HOT!** MACWORLD Expo/San Francisco 2000 is the ultimate Mac experience to users of all levels for work, home, the classroom or just for fun! MACWORLD Expo delivers the tools and education to maximize your Mac's performance, and is the **BIG EVENT** for everyone in Mac computing: designers and educators, Webmasters and entrepreneurs, students and home users, new media creators, publishers and developers.

- **400+ exhibitors with the latest Mac innovations**
- **Bold new developers and industry stalwarts strut their stuff**
- **Special Programs for new venture seekers, corporate buyers & consumers**
- **Two critically acclaimed conference programs led by industry experts**
- **National Macintosh Gaming Championship-2000 series**

Find great deals on exciting products for sale on the show floor. Make valuable connections with vendors, dealers, developers and fellow users. Join 70,000 Mac users at North America's largest and most comprehensive Mac event-register today for **MACWORLD EXPO 2000!**

Go to **www.macworldexpo.com** or call **800-645-EXPO** to register and get up-to-the minute event updates.

Sponsored by: iMacworld, MACCENTRAL "THE PLACE TO BE", Macworld, MacWEEK.com, MacBuy.com

Media Sponsor: "onLine Tonight!"

Managed by: IDG EXPO MANAGEMENT COMPANY

www.macworldexpo.com

800.645.EXPO

MHJ

advertiser index [sales@machome.com]

Advertiser	Phone	Technical Support	URL	Pg. #
Abject Multimedia	888-230-8465	204-982-6090	www.earthlingsgame.com	85
Adaptec	800-442-7274Ext. 5955		http://cdr.adaptec.com/mhtoastd	47
Agfa	978-658-5600	970-522-1380	www.agfahome.com	7
Ambrosia Software	716-325-1910	716-325-1910	www.ambrosiasw.com	99
Apple Computer	800-795-1000	800-505-APPLE	www.apple.com/wireless	BC
Apple Computer	800-795-1000	800-505-APPLE	www.apple.com	2-3
ARS Nova	206-889-0927	206-889-0927	www.ars-nova.com	97
ASD Software	909-624-2594	909-624-2594	www.asdsoft.com	96
Aspyr	888-21ASPYR	512-708-8100	www.aspyr.com	27
Brother International	888-879-3232	800-276-7746	www.brother.com/us	55
Bungie	800-295-0060	312-255-9600	www.bungie.com	IFC-1
Claris User Group	800-781-AWUG	800-781-AWUG	www.awug.com	98
Coast to Coast Memory	800-4-MEMORY	800-4-MEMORY	www.18004memory.com	96
Connectix	800-950-5880	800-839-3627	www.connectix.com	86
Corel	613-728-8200	613-274-0500	www.corel.com	35
Corel	613-728-8200	613-274-0500	www.corel.com	41
Desktop Services	800-224-5899	800-224-5899	www.mac4u.com	97
Disney Interactive	N/A	818-553-3903	www.disneyinteractive.com	13
Earthlink	800-395-8425	800-395-8424	www.earthlink.com	57
Electronic Arts	N/A	N/A	www.simcity.com	21
Epson	800-goepson	340-782-2600	www.epson.com	16-17
Gathering of Developers	877-GODGAME	214-880-0001	www.godgames.com	25
Graphic Simulations	972-386-7575	972-386-7575	www.graphsim.com	31
Green Dragon	601-473-HACK	601-473-HACK	www.greendragon.com	99
Griffin Technologies	615-255-0990	615-255-0990	www.griffintechnology.com	101
Harmonic Vision	800-644-9994	800-644-9994	www.harmonicvision.com	98
Humongous Entertainment	425-486-9258	425-485-1212	www.humongous.com	69
iMac Button	559-438-8601	559-438-8601	www.imacbutton.com	97
ImagiQ	800-750-0787	800-750-0787	www.imagiQ.com	96
KB Gear	612-941-1905	612-941-1905	www.kbgear.com	67
Leister Productions	717-697-1378	717-697-1378	www.leisterpro.com	98
Mace Group/MacAlley	800-644-1132	800-644-1132	www.macally.com	95
Mac-o-Rama	877-MACONLY	800-644-1132	www.mac-o-rama.com	96
Mac-of-all-Trades	800-304-4693	800-644-1132	www.macofalltrades.com	97
MacMall	800-579-0698	N/A	www.macmall.com	90-91
MacMart	800-600-2708	800-644-1132	www.macmart.com	95
MacServe	N/A	N/A	www.macserve.net	98
MacSoft	800-229-2714	612-559-5301	www.wizworks.com	23

Advertiser	Phone	Technical Support	URL	Pg. #
MacSoft	800-229-2714	612-559-5301	www.wizworks.com	73
MacSolutions	800-873-3RAM	800-873-3RAM	www.macsolutions.com	97
MacWorld Expo	800-645-EXPO	N/A	www.macworldexpo.com	88
MacZone	888-783-2603	N/A	www.zones.com	92-93
McGraw Memory	800-883-9697	800-883-9697	www.mcgrawmemory.com	98
MicroMat	800-829-6227	707-837-8012	www.micromat.com	IBC
Other World	800-275-4576	800-275-4576	www.macsales.com	102-103
Pangea	512-367-8116	512-367-8116	www.pangeasoft.net	29
Par Technologies	480-922-0044	480-922-0044	www.partec.com	49
PowerMax	800-621-2871	800-621-2871	www.powermax.com	100
Pre-Owned Electronics	800-274-5343	800-274-5343	www.preowned.com	94
Real Software	512-292-9988	512-292-9988	www.realsoftware.com	83
Ricoh	888-742-6410	800-459-3968	www.ricohcpg.com	45
Sears	847-286-2500	847-286-2500	www.sears.com	52-53
Simon & Schuster	888-793-9972	800-983-5333	www.simonsays.com	75
Software Showcase	732-660-8820	732-660-8820	www.softwareshowcase.com	98
Spiderweb Software	206-789-4438	206-789-4438	www.spidweb.com	99
Techworks	800-688-7466	800-688-7466	www.techworks.com	9
The 3DO Company	N/A	650-261-3454	www.mightandmagic.com	77
Trexar Tech	770-442-8045	770-442-8045	www.mactuner.com	99
VST	978-635-8200	978-635-8282	www.vsttech.com	40
Vtech Software	800-742-1050	N/A	www.vtechsoft.com	63
XLR8	888-XLR8TOR	316-636-5544	www.xlr8.com	51
Zoom	800-631-3116	800-631-3116	www.zoom.com	101

attention readers

If you are having any difficulty with your current MacHome subscription service we are committed to helping you. Follow these procedures so we may guarantee a swift remedy to your problems.

one E-mail us subproblems@machome.com
two Write us MacHome P.O. Box 469 Mt. Morris, IL. 61054
three Go to our web special customer service web page Machome.com/sub problems.

In all instances please include your current name, address, and e-mail .

If you are having problems with your MacHome CD please go to new CD replacement page at **MacHome.com/CD**

500MHz Power Mac G4!

Special Offers!

Mac OS 9.0! New!

Over fifty new features designed to give you more accessibility, security and support. Easily customizes itself to how YOU use your Mac!

Over 50 NEW features, including Sherlock 2!

- Sherlock 2.0
- Multiple user support
- Automatic system updates across the Net!
- Improved game support
- Multi-processor friendly!

only $88.99 #49794

Authorized Reseller

K7 17" Display

- 17"/16.3" VI Monitor
- 1152 x 870 @ 65Hz
- .28mm dot pitch

only $179.99 #44538

$50 Price Drop!

Zip 250MB External Drive

only $149.99 #41332

External SCSI. Price reflects $20 mfr. mail-in rebate. Price before rebate is $169.99

ePhoto 780C Digital Camera

AGFA

- Images up to 1024 x 768 w/Agfa PhotoGenie
- 1.8" LCD
- Up to 96 photos on each removable memory card

only $199.99 #48140

"SMART" DEAL!

56K V.90 External Modem

Get V.90 right out of the box. No rebate hassles!

only $59.99 #39443

While supplies last!

Astra 2200U USB and SCSI 2 Scanner

UMAX

New! Hot Deal!

- 36-bit
- 600 X 1200dpi res.
- USB and SCSI-2
- 8.5 x 11.7 scan area

$249.99 #49245

Ultimate Rez 2D/3D

128-bit 2D/3D video controller. Twin Turbo 128-3D; dual ported EDO VRAM!

While Supplies Last!

only $74.99 #47690

Shipped in non-retail packaging. Includes card, driver and manual.

Nightfall

Uncover ancient secrets within an Egyptian tomb in real-time 3D. Encounter mysteries and solve intriguing puzzles.

only $24.99 #45562 New!

BEST SELLER! Adobe Photoshop 5.5 Upgrade!

as low as $114.94 #47478

Price reflects $70 mfr. mail-in rebate in box for Photoshop 5.0 or ImageReady

Quicken 2000

New! deluxe Quicken 2000

Gives you more information and resources specific to your financial situation!

$39.99 #48131 Intuit

Price reflects $20 mfr. mail-in upgrade rebate.

Norton Utilities 5.0 for the Mac!

SYMANTEC.

The safe way to quickly repair disk problems on your Mac!

$44.99* #48932 New!

#48587 Norton AntiVirus 6.0 Mac $44.99**

*After $50 mfr. mail-in upgrade/crossgrade rebate.
**After $20 mfr. mail-in upgrade/crossgrade rebate.

iBook The Portable iMac!

Outrageous performance.

- 300MHz PowerPC G3 processor
- 512K backside level 2 cache
- 66MHz System bus
- 32MB of SDRAM; supports to 160MB RAM
- 3.2GB IDE hard disk drive
- Built-in 24X CD-ROM drive

Connectivity.

- One 12-Mbps Universal Serial Bus (USB) port
- Built-in 10/100BASE-T Ethernet
- Built-in 56K modem

Great graphics and video features.

- ATI RAGE Mobility graphics controller with 2X AGP for 2D/3D
- 4MB SDRAM video memory
- 12.1-inch (diagonal) built-in TFT SVGA active-matrix display
- 800 x 600 res. for millions of colors
- Built-in speaker
- 16-bit stereo sound output

Compact size.

- 13.5" x 11.6 " x 1.8"
- 6.6 pounds

Cool software.

- Mac OS 8.6
- Netscape Communicator
- AppleWorks and MORE!

only $1,594

Or lease for $56/mo.

#49781 Blueberry
#49782 Tangerine

Up to 6 hours battery life!

PowerBook G3

HOT!

Plus FREE Carrying Case with PowerBook purchase! A $60 Value! While supplies last!

- 333 or 400MHz PowerPC G3
- 64MB RAM exp. to 384MB RAM
- Hot-swappable expansion bay
- 2 USB ports, SCSI port, power adapter port
- Built-in 10/100BASE-T Ethernet
- One PC Card Slot ■ Mac OS 8.6
- 8MB SDRAM video memory
- ATI RAGE LT Pro video controller
- 10.4" x 12.7" x 1.7" @ 5.9 lbs.
- 14.1" (diagonal) display
- Includes 1 Lithium-ion battery, 5 hrs.; supports 2 batteries, 10 hrs.

Order	MHz	RAM	HD	Cache	Drive	Modem	Display	Price	Lease
#48974	333	64MB	4GB	512K	24X CD-ROM	56K	14.1" Active Matrix	$2,494	$88
#48975	400	64MB	6GB	1MB	DVD-ROM	56K	14.1" Active Matrix	$3,494	$122

Call for Even Lower Prices! Ask for details on our low lease rates!

Introducing the All New Mac Software & Accessories Buyers Guide!

Call For Yours Today!
1-888-425-MALL
Visit our online catalog at software.macmall.com

MacMall EXCLUSIVE!

Up to $300 Instant Cash Back + up to $25 in MacMall Gift Cheques!

Ask for #48938.
All products priced between:

Product Price	Instant Cash Back	MacMall Gift Cheque
1294-1599	$50	$10
1600-2499	$100	$25
2500-2999	$150	$25
3000-3499	$200	$25
3500-4396	$250	$25
4397 +	$300	$25

No coupons to mail in. No checks to wait for. Best of all, there is no limit— so order as many times you want, and keep saving! Cannot be combined with Free Memory promo. Gift cheques are redeemable for merchandise only. No cash redemptions. Valid through 11/16/99. Limit one gift cheque per computer purchased.

Enter to WIN a $10,000 ART COLLECTION

when you register for our e-mail Advantage Newsletter

PHOTODISC®

and and

Imagine having a 50 disc library of the finest royalty free stock photography right at your fingertips!

Go to macmall.com to enter!

Offer ends 10/31/99.

FREE Shipping on all online orders totaling over $500

Call for details. Free shipping is via UPS Ground for deliveries in the continental U.S. Offer ends 10/31/99.

Go to macmall.com

Order Any Time! Open 24 Hours!
Order Today by 10pm EST—
Get it Tomorrow by 10:30 am!

1-888-579-0698

Order at macmall.com

NEW G4s!

All models include:

- 1MB backside level 2 cache
- PowerPC G4 Processor w/ Velocity Engine advanced vector processing technology
- ATI RAGE 128 graphics card with 16MB of graphics memory
- 2 USB ports
- 2 or 3 built-in FireWire ports

Order#	#51578	#51579	#51580
MHz	400MHz	450MHz	500MHz
RAM	64MB	128MB	256MB
Hard Drive	10GB	20GB	27GB
Multimedia	32X CD	DVD-ROM	DVD-RAM
Zip Drive	N/A	Yes	Yes
Modem	56K	56K	N/A
Price	$1,594	$2,494	$3,494

Monitor sold separately

The Perfect Compliment to your G4!

- 17" (16" viewable)
- .25mm dot pitch
- 1600 x 1200 @ 60Hz

Apple 17" Studio Display
$499.99 #51582

Authorized Catalog Reseller

96MB iMac!

FREE extra 64MB RAM w/333MHz iMac
Limited time offer. While supplies last!

Blueberry #46955
Grape #42839
Tangerine #46954
Lime #42842
Strawberry #42841

MacMall Exclusive!
Connectix Virtual Game Station
Play many PlayStation games directly on your Mac!
only $19.99 with your iMac or iBook purchase!
(#48961)

only $1194 each

HOT USB PERIPHERALS for your iMac, iBook, Power Mac G3/G4 or PowerBook G3!

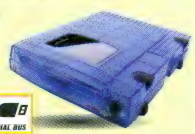
SnapScan 1212UB Scanner AGFA
- 600 X 1200 resolution
- USB for quick setup
- 9600dpi enhanced

HOT DEAL!

now $104.99 #41512
Price reflects $30 mail-in rebate. Offer expires 10/31/99.

Iomega® Zip® 100MB USB Drive
- Hot swappable
- Translucent blue

only $129.99 #34314



4-Port USB Mini Hub for your PowerBook
Macsense
only $29.99 #47702

Que! USB CD-Rewritable Drive
- Hot-swappable interface
- Includes fashionable carrying case

$299.99 #45035

Epson Stylus Scan 2000 Multifunction
- 6ppm black; 5ppm color printing
- 36-bit color scans
- Color copier

EPSON
only $349.99 #51645

Stylus Color 740i Blueberry Printer EPSON
Optional printer covers in all iMac and iBook colors!
$179.99 #48226
Reg. price $229.99 less $50 mfr. mail-in rebate= $179.99.

NEW LOW PRICE!

We'll beat any advertised price on any computer in stock! We'll beat any price on any Mac® or PowerBook from any authorized Apple® catalog reseller, retail store, online store or apple.com! Call for details on our latest MacMall Special Promotions! CPU promotions apply to CPUs only in this advertisement and are subject to change due to new product announcements or price drops. All offers expire 11/16/99 unless otherwise noted or while supplies last. Free shipping is via UPS Ground for deliveries in the continental U.S. Offer expires 10/31/99.

macmall.com or AOL Keyword: Mac Mall
Mention your Priority Code: #ZMHM9B1

MacMall

macZone®

the next generation of The Mac Zone

Authorized Catalog Reseller

$100 Off

Brand New!

Apple iBook™

- 300MHz PowerPC™ G3 processor
- 3.2GB IDE hard disk
- 32MB SDRAM, upgradable to 160MB RAM
- 12.1" TFT Active Matrix SVGA display (800x600)
- 24X maximum variable speed CD-ROM drive
- 56K modem, 10/100 Ethernet
- Crush-resistant polycarbonate case
- Battery life up to six hours
- Weighs only 6.7 pounds
- Comes with Software to go

Blueberry
Item #110916

Reserve yours today!
$1594.96

iMac to Go!

Tangerine
Item #110915

$200 worth of FREE Software with every iBook!

#110915 Apple iBook – Tangerine $1594.96
#110916 Apple iBook – Blueberry $1594.96
#110917 AC Power Adapter for iBook $68.96
#110918 Rechargeable Battery for iBook .$139.96

Get Unplugged!

ONLY $294.96 #110920

iBook AirPort Base Station

- Surf the Net or network wirelessly*
- Up to 150' range lets you and the iBook roam around the home or classroom

*Requires the AirPort Card

#110919 AirPort Card $99.96

FREE STUFF LIKE THIS!

Click here

at www.zones.com

FREE* MYST
Ask for #103750

*plus $2.98 shipping and handling. All offers while supplies last. Subject to change without notice.

Get $100 MacBucks

Apple iMac

ONLY $1194.98 EACH

- 333MHz PowerPC™ G3 processor
- 512K backside cache
- 32MB SDRAM memory
- Two 12 Mbps USB ports
- 6.0GB hard drive
- 24X max. var. speed CD-ROM
- 56K modem
- 10/100Base-TX Ethernet
- 15" monitor (13.8" viewable)
- 6MB SGRAM video memory
- ATI Rage Pro 2D/3D graphics card

Choose your favorite flavor

Strawberry	#102986
Lime	#102989
Tangerine	#102988
Grape	#102987
Blueberry	#102985

$100 Off Any Purchase

at Zones when you open an account with E*TRADE

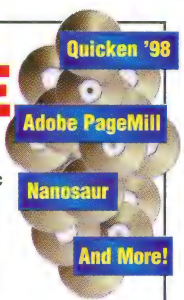
Get complete details at www.zones.com/etrade

$1 a day brings an iMac your way!
Apple Loan Program
CALL NOW TO APPLY!

XLR8 Internal Video Capture

$99.99
Ask for #609654

FREE Software with every Apple® iMac



$400 value!

Titles are subject to change.
Retail packaging not included.

AppleCare iMac

Two year extension

Extends warranty coverage two additional years (3 years total)
Includes keyboard and mouse
Item #621907 • $179.99

Outstanding print quality at 1440x720 dpi!

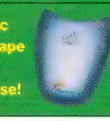
#1 SELLING iMAC PRINTER!

Epson Stylus 740i Color Inkjet Printer

ONLY $179.99** #107815

**After $50 mfr. mail-in rebate. Low Zone price: $229.99. Offer good through 1/31/00.

Give your iMac mouse the shape and feel of a standard mouse!



MacSense iCatch only $9.99 #102671

we're open 24 hours a day 7 days a week

NO SURCHARGE ON CREDIT CARDS

Credit cards are not charged until the order is shipped. Most products ship the same day (barring system failure, etc.). Shipping options include Ground, 2nd Day and Overnight delivery. Freight is based on average product weight. Handling extra. Insurance available. Special orders may require special shipping and handling charges. Call for international shipping rates. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand. Not responsible for typographical errors. All products sold by Multiple Zones International (MZI) are third party products and are subject to the warranties & representations of the applicable manufacturers, including but not limited to Y2K compliance. Accordingly, MZI makes no representation or warranty with respect to Y2K compliance of product sold. ©1999 Copyright Multiple Zones International Inc. All rights reserved. Unauthorized duplication is a violation of applicable laws. Apple®, the Apple logo, Macintosh® and PowerBook® are registered trademarks of the Apple Computer, Inc.

Any Purchase!

when you open an account with E*TRADE

Get complete details at www.zones.com/etrade

NEW Power Mac G4's are here!

visit www.zones.com/newmacs for details

Authorized Catalog Reseller

Visit your one stop source for USB products www.zones.com/usb

Imaging

$499.96 -$100 $399.96* #653072 *when you open an E*TRADE account.

Take great pictures wherever you are!

Olympus D-450 Digital Camera

ONLY $99.98 #97188

600x1200 resolution, 36-bit color and great scanning software!

AGFA SnapScan 1212U Blue

Gaming Devices

ONLY $39.99 #101329

Put iMac power in the palm of your hand!

Ariston Ares USB Joystick

ONLY $49.99 #106162

USB programmable Game Pad

iShock

USB Storage

$179.99 -$100 $79.99* #650368 *when you open an E*TRADE account.

250MB of removable storage – fast and easy!

Iomega USB Zip 250 Drive

$149.98 -$100 $49.98* #109035 *when you open an E*TRADE account.

Use floppy disks and add 120MB storage!

NEW!

Imation USB SuperDisk Drive 2X

ONLY $89.99 #107094

Cool looking drive handles 1.44MB floppies!

VST USB Floppy Drive

USB Connectivity

ONLY $79.99 #621851

Connect your existing printer to your iMac!

USB Twin Serial Adapter

ONLY $59.99 #30039

The easiest way to hook up devices to your iMac!

Entrega 4-Port USB Hub for Mac

USB Input

ONLY $29.99 #31901

The mouse your iMac deserves!

MacALLY iMouse USB Mouse

ONLY $39.99 #31906

Excellent response – plus the iMac look!

MacALLY iBall USB Trackball

ONLY $49.99 #31933

Full-size, soft-touch for comfort and control!

MacALLY iKey USB Extended Keyboard

ONLY $79.99 #101373

COMES IN 5 iMAC COLORS

High-quality SRS surround-sound!

CoZo iMac Speakers

USB Accessories

ONLY $49.99 #100676

Surge suppressor, mouse pad, CD-rack and wrist rest!

Belkin iMac Starter Kit

Digital Sound

ONLY $269.99 #649033

Listen to digital music on the go!

RIO 500 MPB

ONLY $48.99 #637018

Best of Macworld!

SoundJam MP3 Digital Audio System

New Software

NEW Version!

ONLY $172.98 #654332

Run PC software on a Mac!

Virtual PC 3.0 with Windows 98

$20 Rebate! NEW Version!

ONLY $39.98* #653343

Organize finances

Quicken 2000 Deluxe

*After $20 mfr. mail-in rebate. Low Zone price: $59.98

$50 Rebate! NEW Version!

ONLY $44.98* #652996

Protect your data

Norton Utilities 5.0

*After $50 mfr. mail-in rebate. Low Zone price: $94.98

NEW! $30 Rebate!

ONLY $84.98* #648707

*After $30 mfr. mail-in rebate. Low Zone price $114.98.

MS Word 98 Special Edition for the iMac and iBook

GAMING EXTRAVAGANZA!

NEW! $44.99 #111560

Build and control your own city!

Electronic Arts SimCity 3000

NEW! $49.98 #109869

Your chance to save the world!

Activision Quake III Arena

ONLY $26.98 #651982

To infinity and beyond!

Disney's Toy Story 2 Action Game

ONLY $44.99 #74846

Enjoy the #1 strategy game!

MacSoft Civilization II Gold Edition

PRICE DROP! ONLY $19.99 #07419

Become a 3D action shooter!

MacSoft Unreal

Visit us online at Zones.com to see our full selection of products at the latest prices!

Corporate bids welcome!
Fax to 1-800-684-8080

A NASDAQ® COMPANY Ticker Symbol: MZON

Source Code MHJ911

Order by Phone
1.888.783.2603

Order Online Today
Zones.com™

If You Think This Is Just Somebody's Used Macintosh...

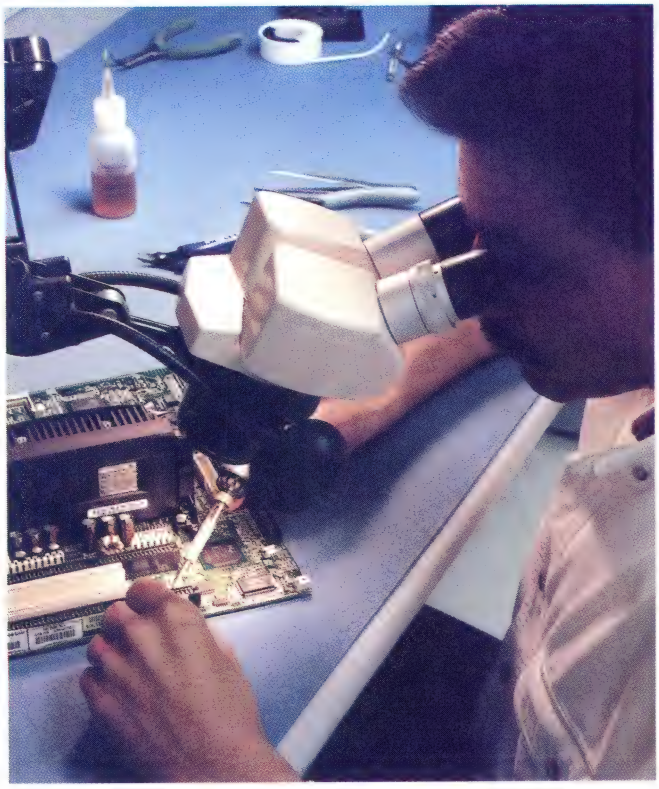
Think Again.

Remanufactured does not mean "cleaned and inspected".

Remanufactured means *re*-manufactured. As in rebuilt piece by piece using genuine factory parts. As in restored to original specs. As in replaced, recalibrated, refinished, retested and repackaged.

What does it all mean to you?

It means the computer you buy from Pre-Owned Electronics will look and perform "like new."



PowerBooks

starting at just **$249!**

Great for e-mail, file exchange, word processing

PowerBook G3/233

Color Notebook with Modem

starting at: **$1299!**

PowerBook 520c

- Color Display
- 20MB of RAM
- Modem
- ClarisWorks software suite

starting at: **$449!**

Ideal for presentations, spreadsheets, Internet

A G3 Ready Power Mac System For Under $500?

You've got it!

The Power Mac 6100/66 computer has everything you need today plus the option to make it a G3 system in the future.

Specifications:

- PowerPC 601 66MHz processor
- 24MB RAM
- Hard drive
- 4X CD-ROM drive
- Color monitor
- Extended keyboard

$499!

Join Our On-Line Advantage Club!

As a member you'll get...

- Special pricing on limited quantity items
- Sneak-peak into upcoming sales
- Updates on items you've pre-selected
- Access to closeouts, discontinued and hard-to-find products

Don't be left out. It's easy to become a member.

Just visit: www.preowned.com

or call: 800-274-5343

to find out how.

ARE YOU SURE IT ISN'T NEW ?

Pre-Owned Electronics

INCORPORATED

125 MIDDLESEX TURNPIKE, BEDFORD, MA 01730

Apple, Macintosh, iMac, PowerBook & LaserWriter are registered trademarks of Apple Computer, Inc. Quantities of all product offerings are limited. Advertised prices are valid while supplies last.
© 1999 Pre-Owned Electronics, Inc. All rights reserved. DIS0078

macally™

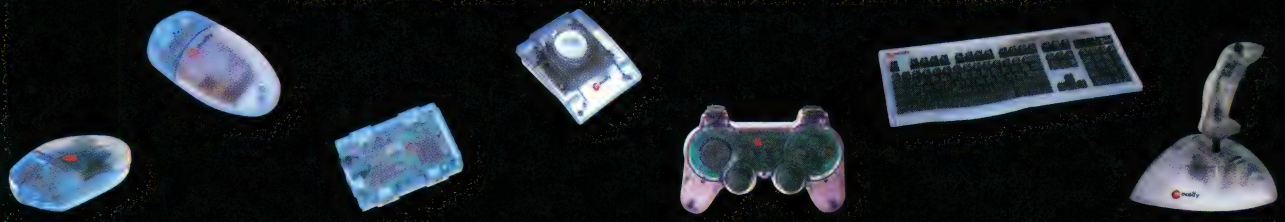
NEW

Supports Keyboard boot-up

macally isweet®

macally ihub7®

USB Peripherals for Mac



Macally is proud to bring you the lastest USB peripherals for Mac user. iMouse, iMousePro, iBall, iBallPro, iStick, iShock, iHub, iHub7, iKey, iSweet, iSweetPro and iSweetNet are specifically designed to pair with your Mac.

Improve your productivity with Macally USB peripherals.

Call us for dealers near you 1-800-644-1132 Visit our website at www.macally.com

All trademarks or registered trademarks are property of their respective owners

MacMart

Systems & Peripherals

GUARANTEED LOW PRICES

On Over 10,000 New Mac Products

If it's New & We don't have it.. Chances are Nobody does

SPECIALS - PRODUCT INFO - UPDATES AT..

macmart.com

POWERBOOKS

iBook 300 12.1" 32 - 3.1 CD-56K	$1529
G3/333 14.1" 64-4GB-CD-56K	$2299
G3/400 14.1" 64-6GB-DVD-56K	$3245
VST G3 PowerBook Zip Drive	$189

PRINTERS

Epson Stylus 740 / 740I / 750	$199 / $229 / $239
Epson Stylus 850 /850N / 850NE	$229 / $399 / $459
Epson Stylus 900 / 900N	$379 / $559
Epson Stylus 1520 / 3000	$465 / $1159
HP 810C / 880C / 895CXI	$199 / $329 / $385
HP Laser 10 PPM - 2100M / 2100TN	$749 / $1059
Tektronix Color Laser 740 / 740 Plus	$1975 / $2765
Xerox Laser 12 PPM USB P1202	$685

SCANNERS & CAMERAS

Agfa 1212U / 1236S / EPhoto 780C	$69 / $189 / $189
Epson 636U / 1200U	$179 / $228
Epson 800 Exec.w/Photoshop / 836XL	$625 / $3089
Kodak DC240 / DC265 / DC280	$543 / $799 / $724
Logitech QuickCam / QuickCam Pro	$72 / $129
Microtek X6 / X6EL / IV	$97 / $169 / $539
Nikon CoolPix 700 / CoolScan III	$529 / $899
Umax 2000U / 2200 / Powerlook III	$119 / $239 / $799

STORAGE

Iomega Zip 100MB / 250MB	$85 / $165
Imation Blue Super Disk 120 Meg	$159
VST FireWire HD 10G /14G /22G	$445 / $599 / $695

G4 POWERMACS G3

G4/400 64 MEG -10GB-CD-56K	$1499
G4/450 128-20GB-DVD-ZIP-56K	$2359
G4/500 256-27GB-DVD/RAM-ZIP	$3249

G3 SYSTEMS PRICED TO MOVE - LIMITED SUPPLY

G3/350 64 MEG - 6 GB - CD	$1299
G3/400 64-MEG - 6 GB - DVD	$1469
G3/400 128 MEG -12 GB-CD-ZIP	$1995
G3/450 128 MEG -9 GB SCSI - CD	$2399

SYSTEM SPECIALS

G3/350 64-6GB-CD-56K Modem SCSI Card & 17" .25 Display	$1699
G4/400 64 -10GB-CD-56K Modem Iomega Zip & 17" .25dp Display	$1885
G4/400 128-10GB-CD-56K Modem Iomega Zip Drive, SCSI Card, 17" Display	$1999
G4/450 128-20GB-DVD - 56K - ZIP 17" Studio Display, Epson 750 Printer	$3035

Contact Us for Substitutions & Other Specials

LifeTime MEMORY Warranty

G3 MEMORY 64 MB / 128MB	$79 / $149
PowerMac DIMM 32 MB / 64MB	$59 / $119
PowerBook & iMac 64MB / 128MB	$79 / $149
72 Pin Simms 16MB / 32MB	$35 / $59

VIDEO DISPLAYS

Apple Studio Display 17" / 21"	$459 / $1399
Sony 17" 210GS / 220GS / V200L (Blue)	$339 / $439 / $479
Sony 19" 420GS / 400PS / F400	$569 / $669 / $929
Sony 21" 520GS / 500PS / F500	$945 / $1099 / $1749
Viewsonic 17" 1280x1024 .26dp / USB	$289 / $379
Viewsonic .19" 1600x1280 .26dp E790 / E790 Black	$419 / $429
ViewMate .25dp 1600x1200 (G3 Translucent Blue)	$299
Princeton .26dp 17" /17" USB / 19"	$299 / $395 / $417
Hitachi .22dp 1600x1200 17" / 19" /21"	$439 / $499 / $899

CALL US FOR MORE UNLISTED ITEMS

G3 & G4 SCSI Card / G3 56K Modem	$49 / $89
G3 Blue 7 Outlet w/Modem Surge Protector	$19
USB HUB 4 Port / 7 Port	$29 / $79
PCI USB CARD (Add USB to Your Older Mac)	$39
Wacom 4x5 Tablet w/Pen & Painter	$159
Sony FireWire 24x/4x/4x CD-RW	$437
Friendly & Helpful Service	ALWAYS FREE

Proud Member of the Better Business Bureau

Order Toll Free in the USA

1-800-600-2708

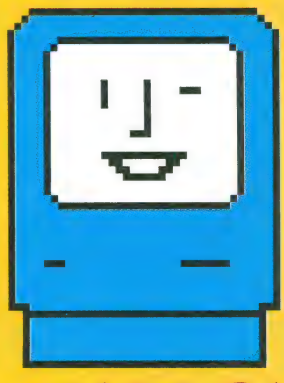
Fax 818-904-1410

15828 Arminta St • Suite 2 • Van Nuys, Ca, 91406

International & Dealer Sales 818-904-1400

Brand Names are Trademarked with their respective holders • Prices listed are COD • Price & Availability subject to change • Restocking fee may apply on some items • C.O.D., Credit Cards, Wire Transfer & Pre-Payment Accepted 9499

MAC-O-RAMA



SUPERSTORE SHOPPER

MAC-O-RAMA SHOPPER

www.mac-o-rama.com

All Macintosh, All The Time!

BEST selection of Software & Accessories!
Super service, & convenient ordering!
Every order earns $$ off your next order!
Used and "old school" games!
Children's and educational software!

SHOP ONLINE OR CALL TOLL FREE
1-877-847-1020 FOR A CATALOG!

Now offered by ASD Software, Inc.

Buy it today - www.asdsoft.com

$29.00

Featuring:
- Uninstall
- Slim Fat Apps
- Delete Files:
  cache
  damaged
  orphans
  empty
  duplicate

And much more!

The no fear way to clean up all that unwanted stuff!

Try YankPro, it's fast, easy to use, and the price is right!

ASD Software, Inc.

ASD Software, Inc. • 4650 Arrow Hwy., Ste. E6. Montclair, CA 91763
Voice: 909.624.2594 • Fax 909.624.9574 • Email: info@asdsoft.com

1•800•4 MEMORY

SELL • BUY • TRADE

WE CAN **BEAT** ANY QUOTED PRICE ON ANY MEMORY FROM ANYWHERE

LIFETIME WARRANTY
NO RESTOCKING FEE
WE ARE THE BEST!!!
CALL AROUND
THEN CALL US

NOW BUYING MEMORY
DIGITAL CAMERAS
NOTEBOOKS

WEB SITE WWW.18004MEMORY.COM

MEMORY

ImagiQ

Mac Only, Mac Everything

Authorized Reseller and Service Provider

Mac Repairs

Apple Authorized - 2 day turnaround

Video Capture System for iMac	$99
AGFA Scanner USB for iMac	$129
AGFA CL-30 Digital Camera for iMac	$389
Fantom USB CD Writer for iMac	$call
Fantom USB External Drive 8GB for iMac	$289
Lexmark Laser Printer for iMac Requires MacOS 8.6	$399
FireWire Hard Drive 4GB	$369
Final Cut Pro	$969
HotRod Calculator 2.0	$29
FileMaker Pro 4.1	$189
Logitech USB Scrolling Mouse	$49
USB Hub	$59
USB Cable Standard Length 2m (6ft)	$9
USB Cable Extended Length 5m (15ft)	$9

Call for other products and for latest pricing.

When you need real answers and essential Mac-specific information – we're the source!

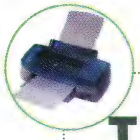
210-377-3545 www.ImagiQ.com 800-750-0787

2325 NW Military Suite 103 San Antonio, TX 78231 Tuesday-Saturday 10AM-6PM

Great Stuff **Macs4U.com**

→ Just for your Mac & iMac

Find today's hottest products for your Mac and iMac .

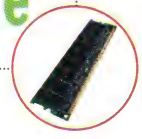


Epson Stylus 740i Call for Best Deal!

Keyspan USB Serial Adapter $79.95

Think Value

TechWorks USBHub $56.95



Memory Call Us for Latest Prices

Why buy from the other mail order places? Can their telephone sales representatives really help you, or are they just trying to make a quick sale?

Our specialists can answer your questions, and help you make the right product selection to fit your needs. **Call or check out our website today!**

www.Macs4u.com **800.224.5899**

Secure Online Ordering

NEW! Songworks II *polyphonic*

Music Composition & Exploration!

Write any kind of music, from leadsheets to symphonies • MIDI not required • Let Songworks suggest tune and chord ideas! • Can notate what you play, via either MIDI or the letter keys • *Active Listening™* is ideal for learning a part in a chorus (tap one of the parts and hear the others play along!) • *Take a Picture* makes it easy to make music examples • Something to do with all that power in your PowerMac • Imports/Exports MIDI files, too • Sophisticated notation with simple tools. $125.

also from Ars Nova:

PRACTICA MUSICA "The best music education program for the Mac" (MacUser). With textbook. Solo edition $99

KIDMUSIC Helps kids learn to read real music notation! Includes Minikeys overlay, 75 songs and exercises. $75

www.ars-nova.com 800-445-4866

iMacButton™

The Reset Button for the iMac

Reset Different!

...Ahhhhhh

Order online

www.iMacButton.com

7081 N. Marks #104-283 Fresno, CA 93711

559-438-8601 Fax 559-435-2511

BUSINESS INDIVIDUAL EDUCATION

your **complete** used **Mac** resource

Mac of All Trades takes the fear out of buying and selling used equipment.

Refurbished and tested

Mac-savvy advisors

Best prices

Guaranteed in writing!

MAC OF ALL TRADES.COM

800.304.4639

Direct : 404•355•5144 Cust. Serv. : 404•355•5713 Fax : 404•355•5461

500 Bishop Street, Suite E•3 Atlanta, GA 30318

SOLD!

Advertise in the Smart Shopper Call David Hughues Today!

415.957.1911 Ext. 38

MEMORY,

Peripherals, Accessories and More!

BEST PRICES!

We'll BEAT any legitimate price! Call Today!

Apple Specialist Authorized Service Provider

MAC Solutions

Order Online @ www.macsolutions.com

(800) 873-3RAM

REUNION 6
the family tree software

"SPECTACULAR"
MacWorld

Create beautiful wall charts, **GREAT for family reunions!** Organize and store your complete family history, then share it on the Internet. It's easy, fast and fun!

- **Link photos, sound, & video**
- **Effortless Web publishing**
- **Drag-and-drop editing**
- **Match/merge**

To order, call **MacConnection 800-800-2222.**

Leister Productions
PO Box 289, Mechanicsburg, PA 17055
phone 717-697-1378 · *fax* 717-697-4373
e-mail: info@LeisterPro.com
web site/demo at www.LeisterPro.com

MacServe.net
MACINTOSH INTERNET

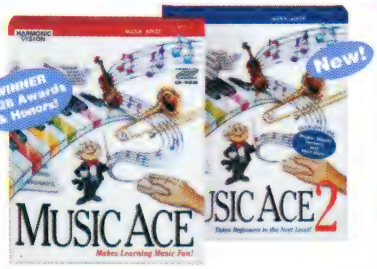
Serve Different.

MacServe.net specializes in Internet services for the Macintosh user. We utilize all MacOS-based servers to provide you the most secure, convenient server platform available.

- Hosting Plans start at $100/year for your own domain, 2 email addresses and 50MB of server space.
- Logon to your server space through the Chooser over the Internet and mount it on your desktop.
- FileMaker Pro, Butler SQL, Valentina and Tango hosting services.
- Internet Backup and QT4 Streaming services

visit us @ www.macserve.net

Introducing the Music Ace™ Series!



- Helps students succeed by providing an engaging introduction to music fundamentals and theory.
- Each title includes 24 lessons, 24 games and a Music Doodle Pad™ composition tool.
- Music Ace™ introduces note reading, ear training, major scales and more.
- Music Ace 2™ lesson topics include rhythm, melody and an introduction to harmony and intervals.
- Home, school and studio versions of each title are available.

For more information, please visit your favorite music software dealer or call Harmonic Vision at
800-644-4994
HARMONIC VISION™
Software that Brings Music to Life!™

Download a FREE DEMO at
www.harmonicvision.com

Batteries!

Every Macintosh contains a small battery that powers the built-in clock and stores your Control Panel settings. Now you can buy these hard-to-find replacement batteries at a special AWUG discount. AWUG's lithium batteries are identical to or better than the original battery that came in your desktop Macintosh. Ten-year shelf life. Includes complete installation directions. Satisfaction guaranteed or your money back. Performa/Quadra 630-series $10.95. All other desktop Macs: $7. (Add $2 U.S. s/h per order.)

Order from: AppleWorks Users Group
Box 701010, Plymouth, MI 48170
(888) 781-AWUG; Fax: (734) 454-1965
orders@awug.org; www.awug.org

STUDENTS TEACHERS
Up to 80% OFF
On today's top Software!

Corel	Microsoft
Extensis	Netobjects
Macromedia	Symantec
MetaCreations	+ Thousands more

FREE T-Shirt With Every Order!*

3D Suite 3.0.....$299	Fireworks 2.0.....$89
CodeWarrior Pro R4.....$119	FreeHand 8.....$99
Dreamweaver 2.0.....$99	Kais Power Tools 5.....$89
Eye Candy 3.0.1.....$79	LightWave 3D 6.0.....$889
FileMaker Pro 4.1.....$139	Media Cleaner Pro 3.1..$249
Mask Pro 2.0.....$199	

FREE Catalog
(800) 699-1836
Call for FREE price quotes!!
www.softwareshowcase.com
Software Showcase Inc.
Phone (732) 660-8820 FAX (732) 660-8828
417 Euclid Ave, Loch Arbour, NJ 07711

Herman Miller Aeron Chair

Better than a Thong!

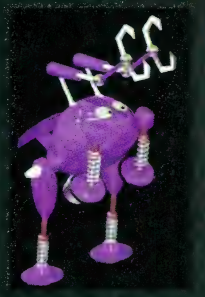
800-883-9697

www.mcgrawmemory.com
www.sittingmachine.com

Green Dragon Creations
www.greendragon.com

The best in Macintosh gaming.

gridz™
www.gridz.com



The Trouble With ToolBots
www.toolbots.com
coming soon

The MacAlive Store
www.MacAlive.com

Mac Headlines
- News, Sports, Stocks & More!
- Scrolling Desktop Ticker

WeatherTracker
- Instant Forecasts on your Mac Desktop!
- 5 Day Forecasts - Plan your Week!

MacTuner
Global Media Receiver
- Live Radio, TV & Scanners
- Browse using World Maps

We make great Mac Games!

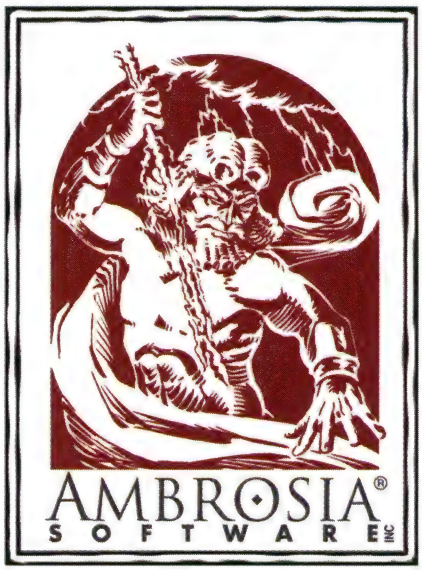
(Though we're still figuring out this whole marketing thing.)

Nethergate

Soldiers of the cruel Empire versus a band of Rebel tribesmen. Both are struggling to control the last magic left in the world. You get to decide which side to play. The whole adventure changes depending on which side you choose ... it's two games in one! CD-ROM, $30.
We have lots of other cool games, too! Get free demos and order at:
http://www.spidweb.com

Spiderweb SOFTWARE

Spiderweb Software
P O Box 85659
Seattle, WA 98145-1659
spidweb@spidweb.com, (206) 789-4438



http://www.AmbrosiaSW.com/

Celebrating a Decade of Quality
Macintosh-only Games & Utilities

CALL THE MAC EXPERTS!

Your one-stop source for everything Macintosh.® Friendly help and expert advice is our specialty!
Call for the absolute lowest prices and immediate delivery on over 30,000 Mac® products!

Commercial-quality video has never been so easy!

Filming and editing commercial-quality video just got a whole lot easier. With a professional Canon camera (package price includes the Elura), a 21" Apple Display§, Final Cut Pro software, FireWire cables and expert advice from your PowerMax consultant, and you're set to produce video like you never thought possible!

Computer not included in price

Only **$3,599-** or just **$137 per month**

Add an extra 20Gb FireWire drive for only $469

Wacom 6x8 ArtZ II ADB Tablet§

Only **$169!**

FREE
32 MB RAM INSTALLED IN EVERY NEW MAC PURCHASED!*

Serving Northwest Mac users for over 20 years

Call the Hard Drive Experts!

1.2 Gb Apple-logo Quantum	Internal	$99 / $149
Four Gb IBM-mfgr. with Apple ROMs!	Internal	$159 / $199
Ten Gb USB External Hard Drive	External	$269
Ref Sony 4x8 CDR Recorder w/Toast	External	$199
Ref Sony 2x6 CDR Recorder w/Toast		$149
Orb 2.2 Gb External Removable Drive		$195
Newer Technology external USB ice blue floppy		$88

Call the System Experts!

- *Professionally bench-tested Macs at low, low pricing.*
- *New models available every day.*
- *Our used and refurbished Macs often offer better expansion, price/performance and upgradability.*
- *Upgrade to a 4 gb. drive on any used Mac for only $139!**

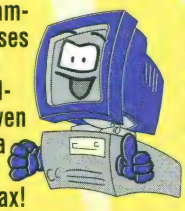
These are just a few of the pre-owned and refurbished Macs we have as of press time. See our web site for complete descriptions and the latest list.

6100/66 16/365/CD	$199	New 4400/200 32/2 Gb	$599
7100/80 24/700/CD	$269	7600/120 32/1.2/CD	$699
7200/75 24/540/CD	$388	S900/200 6 slot PCI 64/4	$988
6360/160 16/1.5/CD	$388	333 MHz iMac	SBlowout!
8100/100 16/500/CD	$488	Ref G3 266 DTop 32/4/CD	$1388
PowerTower 601/120 104/2	$588	Ref Pbk G3-300 64/8/DVD	$2488
PowerBook 5300C/100	$569	We keep Platinum Towers in stock!	

Call the Display Experts!

DISPLAY BLOWOUT!!!

Our warehouse is jam-packed with purchases we've made on the finest displays available today. Don't even *think* about buying a new monitor without calling PowerMax!



NEC CS500 15" Display with Harmon & Kardon speakers	~~$199~~	**$159**
You have to see — and hear — this display to really appreciate it!		
PowerMax 17" Sony Trinitron®	~~$499~~	**$349**
.25mm dp with max resolution of 1600x1280— our technicians' favorite display!		
Refurbished Apple 17" "Blue & White" Studio Display	~~$499~~	**$359**
Save big bucks on Apple's most stylish display ever!		
Apple ColorSync 750 17" Display	~~$699~~	**$369**
ColorSync technology, 1280x1024 max res, .25mm dp Trinitron® display		
PowerMax 20" Sony Trinitron	~~$599~~	**$488**
Legendary Sony Trinitron quality with our best ever on any Trinitron® 20"!		
Nokia 445xPro 21" Display	~~$1399~~	**$849**
Save over $500 simply because Nokia changed models to include USB!		
Refurbished Apple 21" "Blue & White" Studio Display	~~$1499~~	**$1149**
Save big bucks on Apple's most stylish display ever!		

TradeUp with PowerMax!

We'll take your Mac OS computer in trade toward the purchase of new product. Call one of our expert Mac consultants for full details!

Visit WWW.POWERMAX.COM
YOUR SYSTEM 9 HEADQUARTERS!
Call us for the best deals and latest updates

Want more? How about PhotoShop 5.5 for only $388? Or Microsoft Office 98 for only $249? Or Norton Utilities for only 29 bucks? We have great deals on lots more stuff! Call Today!

EPSON

Epson Stylus 17x22 printers§

#1520 $268
#3000 $888

§Factory refurbished units

Call for great discounts on the latest USB Epson & H.P. printers!

- **Personal Financing • Fast P.O. Approvals**
- **Business Leasing • Extended Warranties**

Authorized Reseller

DISCOVER NOVUS VISA MasterCard American Express

POWER MAX
Knowledge is Power

800-621-2871

Local: (503) 624-1827 • Fax (503) 624-1635
email: sales@powermax.com

Prices subject to change without notice. Prices reflect cash discount. Credit card orders strictly verified against fraudulent use. With use of credit card as payment customer acknowledges that some products are subject to final sale. Many prices are limited to stock on hand. All brand or product names are registered trademarks of their respective holders.

* Some restrictions apply. iBook is not included in promotion. Call for complete details.

WANT THE BEST MAC DEALS? ASK A USER GROUP MEMBER HOW EASY IT IS!

Only Macintosh User Group members enjoy access to a very special Apple-sponsored web site featuring super discounts on great new products, factory refurbished and discontinued Macs, and much more! Not a member? Find out how you can get these great deals by calling PowerMax at 800-689-8191.

www.applemugstore.com

MUG STORE
Apple Specialist

The MUG Store. A cooperative venture between Apple and PowerMax to bring MUG members exclusive deals on the latest Mac® products and special offers on discontinued and factory refurbished computers.

PowerMax is a division of Computer Stores NW, Corvallis, OR.

Look.

The full color, live-motion ZoomCam™ USB installs in a snap with 704 x 576 resolution and 30 frames per second for under $80*!

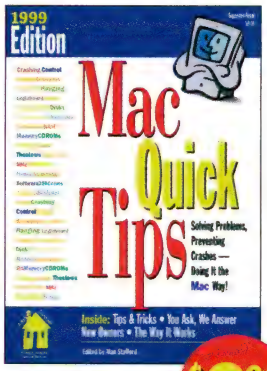
1-800-631-3116 ZOOM www.zoom.com

© 1999 Zoom Telephonics, Inc. *estimated retail price

Available at Mac Warehouse 800-800-2222 & MacConnection 800-225-6227

1999 Edition

Mac Quick Tips



The 1999 MacHome Mac Quick TIps gathers all the information from an entire year's worth of your favorite MacHome sections – Tips & Tricks; You Ask, We Answer; The Way It Works; and New Owners – all in one easy-to-use book. We'll show you how your Mac and iMac works, how to fix what ails it and how to keep it in tip-top form!

$9.95

To Get your Mac Quick Tips, call

800-577-4MAC

When your Mac or iMac locks up, turn to MacHome and the iMac Buyer's Guidefor the key!

iMate

UNIVERSAL ADB TO USB ADAPTER

- One iMate can support multiple devices
- Activity LED
- Supports keyboard soft power on and off
- Successfully tested by Apple and major hardware manufacturers

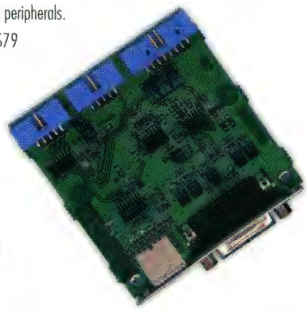
Easily Connects Any ADB Device To USB-Equipped iMac or PC Computer

The innovative iMate USB to ADB adapter allows users to easily connect their existing ADB peripherals to iMacs, Macs with USB cards, and PCs with USB. The iMate is compatible with any ADB device including mice, keyboards, trackballs, trackpads, hardware dongles, and AppleVision displays. The iMate is a simple and inexpensive solution for making the transition to USB as well as preserving your investment in ADB devices. Retail price $49

iPort

iPORT GETS YOU CONNECTED

The iPort universal adapter for iMacs has the i/o connections Mac users have come to depend on. Designed from the ground up with the iMac in mind, it features video out capable of supporting up to 1600x1200 resolution and a serial port that is compatible with all of your existing peripherals.
Retail price $79



- The iPort allows users to connect any Mac or PC monitor at resolutions of up to 1600x1200
- Also supports video mirroring*
- Supports all Mac compatible serial devices
- Supports LocalTalk file sharing and printing

Video mirroring is only available at 640x480, 800x600, and 1024x768

GRIFFIN TECHNOLOGY

80 Fesslers Lane • Nashville, Tennessee 37210
info@griffintechnology.com • www.griffintechnology
615.255.0990

gPort

THE SERIAL SOLUTION

The gPort universal serial adapter is the perfect companion for your new blue G3 computer. Designed from the ground up with the G3 in mind it supports every serial device that works on your older Macs.

The gPort uses the internal modem slot for "board level" compatibility and provides a great transition for people with existing serial equipment. Retail price $49

- Easy to install
- Economical
- Cost Effective

Supports:

- Midi Interfaces
- Serial Printers
- PDAs/Palm Pilots
- Localtalk Printing & File Sharing
- Modems/ISDN Adapters

NE Mic

UNIVERSAL MACINTOSH AUDIO ADAPTER

Designed for both professionals and hobbyists, the NE Mic™ adapter provides superior audio input quality when used with hundreds of readily available PC and consumer products.
Retail price $20

Features/Benefits:

- Works with any Microphone
- Low-Noise Amplifier
- Inexpensive Solution
- No Setup or Drivers Required

The NE Mic™ Audio Adapter allows you to use ANY inexpensive PC microphone with desktop Macs made by Apple Computer and other Mac clones. It also supports the new Blue and White G3 and iMac models. We also have a line of inexpensive microphones and headsets with great bundling prices ($25 for NE Mic and desktop Mic or NE Mic and headset)

Open Monday-Friday: 9am-8pm & Saturday: 10am-5pm CST E-Mail Us at: owc@macsales.com

other World Computing

Serving the Mac Universe Since 1988

24hr. Online Ordering & Info Daily Updated Prices & Specials

VISA MasterCard AMERICAN EXPRESS DISCOVER C.O.D.

800-275-4576

FedEx Federal Express

FAST! EASY! SECURE!

Competitive Prices, Quality Products and NEVER a Surcharge for Credit Cards!

www.macsales.com
On Web Commerce has Easy, Fast Secure Internet Ordering Now

G3 PROCESSOR UPGRADES

SONNET SIMPLY FAST

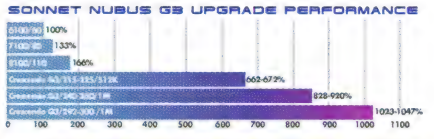
G3 Upgrades for Nubus PowerMac

6100/7100/8100
WGS 6100/7100/8150
Radius 110
Performa 611X Series

SONNET Nubus Series from $295

G3/250mhz 512k 2:1	$295
G3/266mhz 1024k 2:1	$385
G3/300mhz 512k 2:1	$385
G3/300mhz 1024k 2:1	$485

SONNET NUBUS G3 UPGRADE PERFORMANCE



SONNET SIMPLY FAST

G3 Upgrades for PCI PowerMac

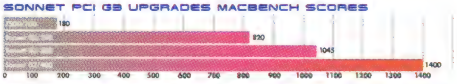
7300/7350/7500/8500/
8550/8600/8650/9500/
9550/9600/9650
PowerComp. PowerCenter/
CenterPro/Tower/TowerPro/Wave
Umax S900/J700

SONNET PCI Series from $239

G3/250mhz 512k 2:1	$239
G3/300mhz 512k 2:1	$289
G3/300mhz 1024k 2:1	$385
G3/400mhz 1024k 2:1	$579
G3/466mhz 1024k	$869

Breaking The Speed Barrier!

SONNET PCI G3 UPGRADES MACBENCH SCORES



SONNET SIMPLY FAST

G3 Upgrades for PowerMac

4400/5500/6360/6400/
6500/20th Anniv./
PowerComputing PowerBase/
Umax C500/60
StarMax 3000/4000/500
Most Motorola Clone

SONNET Banker G3 Series from $245

G3/250mhz 512k	$245
G3/300mhz 512k	$295
G3/300mhz 1024k	$385
G3/400mhz 1024k	$585

"Product of the Show"
MacWorld NewYork'99

G3 → G4 UPGRADES

PCI ZIF-POWER!

NEW @OWC

For PCI Macs with a DaughterCard slot.

PowerMac 7300/7350/7500/8500/
8550/8600/8650/9500/9550/9600/9650
Power Comp. PowerBase/Center/CenterPro/
Tower/TowerPro/Wave
Umax S900/J700

XLR8 by INTEREX

Interex XLR8 ZIF Carrier PCI DaughterCards

ZIF Carrier Card without ZIF Processor	$155
ZIF Carrier with OWC Mercury G3/300mhz 1024k Cache	$329
ZIF Carrier with OWC Mercury G3/350mhz 1024k Cache	$379
ZIF Carrier with OWC Mercury G3/400mhz 1024k Cache	$499

SAVE @OWC

DaughterCard Gives Your PCI Mac ZIF Upgradeability!
Upgrade with a G3 Now and Put a G4 on it later!
XLR8 ZIF Carrier will work with the same ZIFs of the Apple G3 PowerMacs. Upgrade your G3 PowerMac with a new ZIF and put the old ZIF on an XLR8 Carrier Card!

ZIF G3 PROCESSOR UPGRADES

G3 ZIF Upgrades for Apple PowerMac G3 Desktop, G3 Minitowers, G3 Servers, All-In-Ones, and Blue & White Machines

- MacBench of Stock Apple G3 Beige 233mhz = **780**
- Apple G3 Blue & White 350mhz = **1152**
- OWC G3/350 Bench = **1350**
- OWC G3/400 = **1475**
- OWC G3/466 = **1722**

SAVE @OWC

OWC Mercury3z G3/350mhz w/1024k 2:1 Cache	$239
OWC Mercury3z G3/400mhz w/1024k 2:1 Cache	$399
OWC Mercury3z G3/466mhz w/1024k 2:1 Cache	$575

Call Today or Visit

www.fastermacs.com

for more upgrade options to Make your Mac a FasterMac! Upgrades for Older Macs too!

Go to

www.macsales.com

for more Mac products, information, AND FREE DELIVERY* for your online orders !!!!!!

Visit us for Monitors, Printers, Deals on USED PowerPCs & More...

SAVE @OWC

MH1099

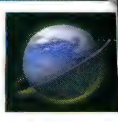
ixMICRO

ixMicro
Ultimate Rez 128 PCI

Video Card SPECIAL! $75 WOW

With 8mb of V-Ram
New with 5 year Warranty

Other World Computing
224 West Judd St., Woodstock, IL 60098
International: (815) 338-8685
Fax: (815) 338-4332



* Free delivery only available for online orders of $100.00 or more shipped to destinations within the 48 continental United States.

Prices, Specifications, and Availability subject to change without notice. Items advertised with 30 day Money Back may be returned complete within 30 days for a full merchandise refund, other items may be returned within 30 days with 15% restocking fee. No returns without Return Merchandise Authorization number.

Open Monday-Friday: 9am-8pm & Saturday: 10am-5pm CST E-Mail Us at: owc@macsales.com

other World Computing

Serving the Mac Universe Since 1988

24hr. Online Ordering & Info Daily Updated Prices & Specials

www.macsales.com has Easy, Fast, Secure Internet Ordering Now.

On Web Commerce

VISA MasterCard AMERICAN EXPRESS DISCOVER C.O.D.

800-275-4576

FedEx Federal Express

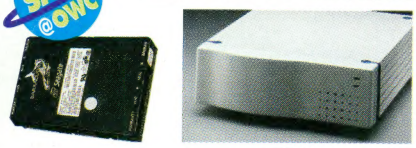
FAST! EASY! SECURE!

Competitive Prices, Quality Products and NEVER a Surcharge for Credit Cards!

STORAGE UPGRADES

SCSI Hard Drives Internal & External

SAVE @OWC



Seagate Barracuda 2.1 Gig

- SCSI
- 7200 rpm
- 7.5ms
- 3 Year Warranty

$109 Internal

External: **$149**

All OWC HardDrives Include

FWB Hard Drive Toolkit 3.0 and 65mb of free software INSTALLED. External version features platinum case with dual SCSI ports, Push-button SCSI ID AND 40 watt power and SCSI cable.

FWB HD Tool Kit v3.0 Included with all Hard Drives

	Int.	Ext.
QUANTUM		
4.5gb Viking 7200rpm 8ms	$179	$229
9.1gb Atlas III 7200rpm 7.8ms 1 year Warranty	$315	$369
18.2gb Atlas III 7200rpm 7.8ms 1024k 5yr Warr.	$595	$659
SEAGATE		
4.5gb Medalist Pro 9.5ms 7200rpm 512k 3yr	$209	$259
9.1gb Medalist Pro 9.5ms 7200rpm 512k 3yr	$349	$399
18.2gb Barracuda 9LP 7.1ms 7200rpm 1024k 5yr	$639	$699
IBM		
4.3gb UltraStar 2ES w/Apple ROM	$175	$229
9.1gb UltraStar 7200rpm 7.5ms	$365	$419
18gb DeskStar 7.5ms	$699	$749

IDE Internal Hard Drives

SAVE @OWC

Seagate

4.3 Gig IDE Seagate Medalist

$99

- ST34321A
- 5400 RPM
- 11ms
- 3 Year Warranty

	Int.
IBM Deskstar GP 13.5gb 5400rpm 9.5ms 3yr Warr.	$169
IBM Deskstar GP 14.4gb 7200rpm 9.5ms 3yr Warr.	$199
IBM Deskstar GP 22.0gb 7200rpm 9.5ms 3yr Warr.	$339
IBM Deskstar GP 25.0gb 7200rpm 9.5ms 3yr Warr.	$339
Seagate Medalist 6.4gb 5400rpm 11ms 3 yr Warr.	$109
Seagate Medalist 17.2gb 5400rpm 11ms 3yr Warr.	$219
Quantum Fireball EX 8.4gb 5400rpm 9.5ms 3.5" w/3yr	$139
Quantum Fireball EX 13.6gb 7200rpm 9.5ms 3.5" w/3yr	$225
Quantum Fireball EX 18.2gb 7200rpm 9.5ms 3.5" w/3yr	$299

Visit our website for our full line for SCSI & IDE Hard Drives.

SAVE @OWC

WOW!

Norton Utilities 4.0

$29.00

WITH ANY PURCHASE

Removable Storage Drives

	Internal w/mount	External
Iomega Zip 100mb SCSI	$99	N/A
Iomega Zip USB for Macs with USB	N/A	$139
Iomega Jaz 2gb SCSI	$339	$349
Zip 100mb Carts - $10 each / $89 per 10		
Jaz 1gb Carts - $79 Jaz 2gb Carts - $89		
Apple Rom 24X CD SCSI	$95	$139
Panasonic 4x8 CDR	$279	$309
Yamaha CDRW4x4x16	$309	$359

CDR 74 Minute Silver Media w/Jewel Case

10 for $15 / 50 for $69.95 / 100 for $129

CDR & CDRW Internal and External Drives Include Toast Software and Media.

Call or Visit our Website for our full line of CDR and CDRW Drives and Media

IDE PowerBook Hard Drives

for PowerBook 150; 190/1400/5300/3400 Series; All G3 PowerBooks; Duo 2300 and 2400

2.1GB Toshiba 4200rpm 12mm Slim with 3 Year Warranty	$135
3.2GB Toshiba 4200rpm 12mm Slim with 3 Year Warranty	$149
4.0GB Fujitsu 4200rpm 12mm Slim with 3 Year Warranty	$159
6.4GB Toshiba 4200rpm 12mm Slim with 3 Year Warranty	$229
6.4GB IBM Slim	$249
8.1GB IBM Travelstor 4200rpm 17mm non-Slim 3 Year Warr.	$315
10.1GB Toshiba Slim	$319
14.4GB IBM Travelstor 4200rpm 12mm Slim with 3 yr Warr.	$499

Call for our full line of IBM, Toshiba and Hitachi

Memory listed by OWC is New with Lifetime Warranty and 30 Day Money Back Guarantee. All Memory products meet or exceed Apple Specifications.

MEMORY UPGRADES

NEW @OWC

iBook Memory

Memory for New Apple iBook!

32 MEGABYTE.....$39
64 MEGABYTE.....$59
128 MEGABYTE $209

SDRAM Memory for Beige and Blue & White G3 PowerMacs

SDRAM 66mhz 100mhz

	(original)	(for New G3's)
32 MEG	$39	$39
64 MEG	$62	$65
128 MEG	$119	$125
256 MEG	$349	$449

SAVE @OWC

Memory for G3 PowerBook Series & iMac

32 MEGABYTE.....$39
64 MEGABYTE.....$59
128 MEGABYTE.....$125
256 MEGABYTE.....$469

Call for PowerBook 190/500/1400/5300/3400/3500 and Duo Series Memory

SAVE @OWC

DIMM 168 PIN Memory

2k Refresh 70 or 60ns (specify)	5V	EDO 5V	EDO 3.3V
16 MEGABYTE	$39	$39	$49
32 MEGABYTE	$59	$59	$95
64 MEGABYTE	$115	$115	$189
128 MEGABYTE	$239	$259	N/A

SIMM 72 PIN Memory

2k Refresh 60ns

8 MEGABYTE.....$25
16 MEGABYTE.....$35
32 MEGABYTE.....$57
64 MEGABYTE For Use in PowerMacs Only.....$115

SIMM 30 PIN Memory

Non-Parity for Older Macs

4 MEG 70 or 60 NanoSeconds.....$15
16 MEG 70 or 60 NanoSeconds.....$35

Mac Video RAM

256k PMac 7100/Quadra800/650.....$12
512k PMac 8100/Quadra's/LC's.....$15
1MEG PMac 72/73/75/76/85/8600 & Compat.....$19
4 MEG Motorola StarMax/PowerMac 4400.....$29
4 MEG G3 Video SGRAM.....SPECIAL! $19

OWC is a Techworks Authorized Reseller.
Call or Visit www.macsales.com for the best prices on Techworks Brand Memory.

TECHWORKS Power To Perform

Other World Computing
224 West Judd St., Woodstock, IL 60098
International: (815) 338-8685
Fax: (815) 338-4332

MH1099

Prices, Specifications, and Availability subject to change without notice. Items advertised with 30 day Money Back may be returned complete within 30 days for a full merchandise refund, other items may be returned within 30 days with 15% restocking fee. No returns without Return Merchandise Authorization number.

ihnatko [Commentary]
By Andy Ihnatko

Chipset Boulevard

The G4's Powerful, but Where's the Drama?

I found myself reacting to the sight of the new Power Macintosh G4 the same way I had reacted to Whoopi Goldberg for a good number of years. You ever have one of those feelings where your brain is just telling you, "Something Is Seriously Wrong Here" but refuses to even serve up a hint as to what it is?

So every time you look at it it's like a raspberry seed under your brain, annoying you more and more until finally you have a breakthrough.

With Whoopi, it was the fact that the woman has no eyebrows. Not that I hold that against her, I rush to point out.

... it opens its mouth and in a voice backed by the power of a 1,000-watt subwoofer menacingly intones, "The printer 'Bulbasaur' is out of paper."

Whenever I think of her, I reflect on the fact that whereas we once referred to her as a Tony- and Oscar-winning actress, people now refer to Whoopi only when they need an X in her spot to win Hollywood Squares. Eyebrows never enter into it, I swear.

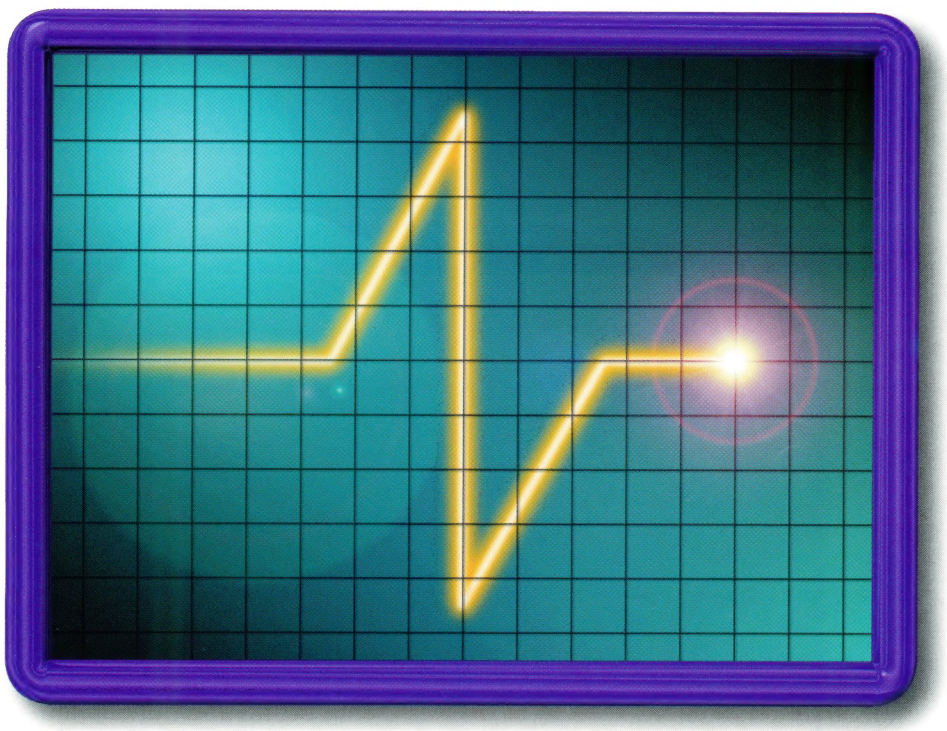
With the G4, I think my chief problem is the fact that Apple is referring to it as a "supercomputer" in its marketing. I got my first face time with a G4-powered Mac a couple of months earlier and honestly, the hairs on my mousing hand still haven't grown back yet, such was the raw, seething power of the chip's Velocity Engine. So I'm not about to deny that it's in that class of performance. It's just that, you know, I don't really want a Supercomputer that looks like that. When I think "Supercomputer," I think of a Cray XMP, the size and shape of one of those big round couches that can be found in the Ladies' Lounge in any good theater (if the flicks on the American Movie Classics channel can be believed). So mighty that huge towers of bubbling water need to be erected around it, just to keep the machine from getting hot enough to melt titanium. Or a Connection Machine, as seen in "Jurassic Park." Millions of little red lights that dare you to even sense what it might be up to. Or even the accumulator in 1971's "How to Frame a Figg," which had lights and blooping noises and the ability to bury Don Knotts up to his waist in punch cards. "I'm still big," you imagine a mainframe at the Computer Museum sneering between martinis. "It's the desktops that got small."

All I'm saying is that even for $1,500, you have a right to expect a little drama. "I own a supercomputer," you think. "Why does it look like an end table Truman Capote might have bought in 1973?" I don't want a compact box of translucent plastic. I want a big, evil-looking, orange floating head. I want to be watching TV in the living room with my friends when an orchid of flame violently unfolds in the middle of the air with an audible roar. With eyes black and red like a dying sun and teeth like a hyperlynx, it opens its mouth and in a voice backed by the power of a 1,000-watt subwoofer menacingly intones, "The printer 'Bulbasaur' is out of paper," before warping back into vapor. At this point I would excuse myself from the room to see to the printing of the remainder of that manuscript.

Look, I promise to let the matter drop now. I know this is the second column in a row where I've dealt with the problem of what Macs look like these days, and I apologize. It's just that this sort of dovetails with an important issue that's being overlooked. Apple's back where it belongs, both in terms of profitability and its technological leadership. The only thing we haven't reclaimed yet is our blissful and profound arrogance. Frankly, nothing would click the lock on Apple's recovery more than a new computer consisting of a 12" motherboard mounted in an 8' wall of superfluous switches, lights, and dials that can only be installed in a hidden bookcase and revealed by turning a statue of Richard Feynman 90 degrees to the right. We, the users, have toughed out Apple's rocky bits and it's the least we deserve. MH

November 1999, Volume 7, Number 11 • MacHome Journal (ISSN #1074-0392) is published monthly by MacHome Journal, 703 Market Street, Suite 535, San Francisco, California 94103. Periodical postage paid at San Francisco, California, and additional mailing offices. Subscriptions: $34.95, payment in U.S. funds only. For credit card subscriptions call 800-800-6542. Postmaster: Please send address changes to MacHome Journal, PO. Box 469, Mt. Morris, Illinois 61054. Printed in Canada.

There's only one utility in the world that does more for your Macintosh than TechTool Pro 2...



Introducing TechTool Pro 2.5

MicroMat's disk repair and Macintosh troubleshooting utility just became a whole lot better. Loaded with new features like Trash Cache™, which allows you to resurrect files you've accidentally deleted. Or our new Automated Diagnostic feature that checks your drives at the time intervals you specify, so you're always sure your drives are in top shape. TechTool Pro 2.5 even now supports new technologies like FireWire drives, USB floppy drives, System 8.6, all of the latest Macs and much more. But the real power of TechTool Pro 2.5 isn't in the features you can see, it's in the features you can't see. Like a multitude of new drive repair routines that can save data that other utilities would simply abandon. An improved recovery system that will find lost files in the darkest caverns of a damaged drive. You'll also find improved performance on key features like disk optimization. But maybe the feature you'll find most interesting about this version is the price: FREE*. If you own any version of TechTool Pro 2, just go to our web site and grab the updater. You'll be glad you did.

MicroMat Inc.
800-829-6227
707-566-3831
FAX: 707-566-3871
info@micromat.com
www.micromat.com

MacHome Journal's Home Choice 1999

Fix different.™

See us at MacWorld Expo New York at Booth #1707

*Version 2.5 is available at no charge to registered TechTool Pro 2 users as an updater application directly from the MicroMat web site. If you do not wish to download the updater or would prefer a new CD, they can be purchased for $25 plus tax, shipping and handling by calling the phone number above. Please have your serial number ready when calling. Prices subject to change without notice.

©1999 MicroMat Inc. All rights reserved. TechTool is a registered trademark of MicroMat Inc. Fix Different is a trademark of MicroMat Inc. Macintosh is a trademark of Apple Computer, Inc.

© 1999 Apple Computer, Inc. All rights reserved.

www.apple.com/wireless